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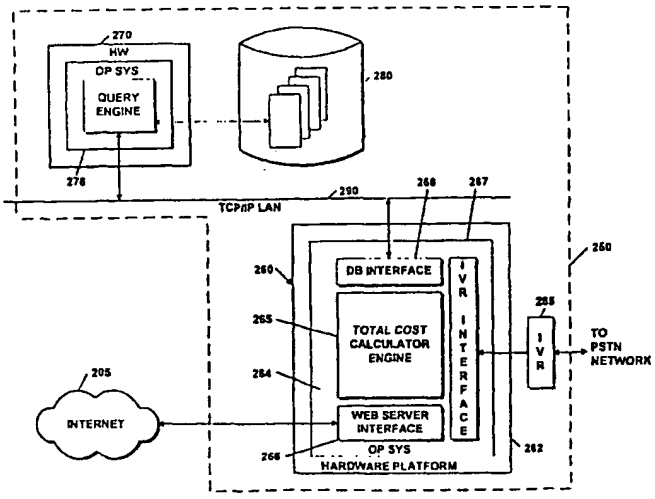
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(54) Title: NETWORK ACCESSIBLE QUOTATION AND SHIPPING SYSTEM



(57) Abstract

A transportation logistics system (250) provides to vendors or shoppers, at the time of purchase, a total global delivered cost quote for shipping a product between locations. The system is accessible over packet switched networks (205), such as the Internet, or over a circuit switched network, such as traditional telephone networks, and includes a web server (260) and a proprietary database (280). A total delivered cost calculator engine (265) retrieves the necessary information from the database, given the requestor input, and performs the necessary calculations. The total delivered cost quote, which includes any applicable inland origin freight, inland destination freight, air freight, ocean freight, insurance, duties, taxes, custom clearance fee, import fee, or service fees is presented to the requestor with both ocean freight and air freight options. The transportation logistic system (250) can coordinate the shipment of the selected product to the delivery destination, and enables the payment of all quoted fees, if the requestor accepts the quote.

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NETWORK ACCESSIBLE QUOTATION AND SHIPPING SYSTEM

FIELD OF THE INVENTION

This invention relates to an automated shipping system, in general, and, more specifically, to a system for providing total cost quotes for shipment of products domestically and internationally and for enabling initiation of shipment automatically.

BACKGROUND OF THE INVENTION

The World Wide Web and Internet, and other technological developments, in general, have created a completely new venue in which to obtain information, purchase goods and services, and interact with other network users. Accordingly, many sources of products and services have established web sites containing information about products, services and available information. A number of commercially available software applications, e.g. web browsers, executable on a conventional computer architecture enable users to connect to the Internet and provide a graphic user interface and appropriate functionality for locating and exploring "websites". Examples of such commercially available browsers include Netscape Navigator, commercially available from America On Line, Inc., or Internet Explorer, commercially available from Microsoft Corporation, Redmond, Washington. Websites typically comprise a server operatively coupled to the Internet, the server having one or more "pages" which may be explored by a user using the web browser application.

Using a web browser, computer shoppers have the ability to access and purchase products from far reaching locations, including international locations. In order to purchase a product, the shopper accesses the web site server of a vendor, selects a product, provides payment, typically in the form of credit card information, and provides delivery instructions to the vendor. When the shopper is located in the same country as the vendor, the vendor may have internal processes established to place the order, coordinate the payment, and transport the goods to the shopper. When the shopper is located in a different country from the vendor, the process is more difficult. In order to ship a product to a different country, a party to the transaction or an agent thereof must pay freight charges, duties, taxes, import charges, and insurance fees, and abide by tariff laws. Many vendors do not have

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internal processes to calculate and coordinate the payment to multiple collection offices. Consequently, the a majority of vendors will not ship a product to a different country. Many vendors, in their general terms and conditions, will not ship internationally. If the shopper purchases a product and wishes to ship it to an international destination, the shopper must first have the product shipped to a third party within the country, then contact an international transportation company to pick up the product from the third party, and, finally, ship the product to the international destination. Alternatively, if the vendor allows products to be picked up by a transportation company from a retail pickup location associated with the vendor, the shopper can pay for the product and separately arrange for an international shipper to pick up and transport the product to delivery destination. The shopper must also arrange for any foreign currency exchanges, duties of the destination country, and tariff laws pertaining to the subject product.

Some third party companies, such as DHL or Federal Express, provide on line access to international shipping costs, however, these cost estimates do not include fees for duties, tariffs, insurance, custom clearance fees, import taxes, etc. This information is only a partial estimate and may not include country specific charges. Accordingly, most shoppers do not know the actual total cost to have the product delivered at the time of purchase. In fact, some vendors web pages include disclaimers that indicate that any actual charges incurred by the shipper are charged against the shopper's credit card or account. Consequently, the shopper must pay charges that could inflate the purchase price by over 100 percent without his/her knowledge or approval.

Accordingly, a need exists for a system that allows a shopper to review the total cost of shipping a selected product to a delivery destination prior to purchase. An additional need exists for a system where vendors from any location, including international, have access to total cost of shipping information. A further need exists for a system that accepts payment of all fees associated with the shipping of the product and initiates shipping of the selected product upon instructions from the shopper. A further need exists for a system that allows the shopper to track the selected product to its final destination.

SUMMARY OF THE INVENTION

The present invention discloses a method, system and apparatus for providing total global delivered cost quotes of shipping a product between locations. The costs includes any applicable ground, air and ocean freight, insurance, duties, taxes, custom clearance fee, or import fees as well as any other cost factors involved. The present invention is implemented with a transportation logistics system accessible by vendors or shoppers over either packet-switched networks, such as wide area network, e.g. the Internet, local area networks, intranets, extranets, and broadband cable networks, etc., or over a circuit-switched network, such as traditional telephone networks, as well as any hybrid combinations thereof. The transportation logistics system comprises a web server and proprietary database. A calculator engine within the web server retrieves the necessary information from the database, given the input from a requestor, and performs the necessary calculations. The total delivered cost quote is then presented to the requestor with both ocean freight and air freight options.

More specifically, a requestor supplies origin/destination and product quantity and description information to the transportation logistics system. The requestor may be a network user connected directly to the transportation logistics system over either a computer network or through a traditional telephone network. Alternatively, the requestor may be a process hyperlinked to the transportation logistics system web site from another eCommerce vendors website. Using such information, the calculator engine retrieves and temporarily stores data from a paired port table, in-land zone table, zone rate table, products description table, duties table, taxes table and custom clearance tables associated with the designated origin/destination information. The calculator engine utilizes the product information to compute the weight and volume of the product and computes all freight charges to a destination port. Duties and taxes are then calculated as well as the custom clearance fees for entry of the product into the destination country. The final delivery costs for the in-land zone portion of the shipment is then calculated. The cost components are summed to form the total global delivered cost quote, which includes any applicable origin inland freight, air freight, ocean freight, insurance, duties, taxes, custom clearance fee, import fees, destination inland fees and other cost involved. The quote is presented to the requestor with both ocean freight and air freight options. The global total delivered costs for multiple items going to the same destination may also be calculated, e.g.

multiple items in the requestors "shopping cart " or other order processing software on the vendors website. For multiple items, the total global delivered costs are aggregated for all items to be delivered to the specified destination. Again, a single quote is presented to the requestor which represents the total delivered costs for all items via both ocean freight and air freight options.

According to one aspect of the present invention, a method for enabling transportation of selected products between locations comprises (a) maintaining in a computer system memory a description of a selected product and the cost associated with transportation of the selected product to at least one destination; (b) receiving from a requestor information identifying a selected product and specifying a destination which the identified product is to be transported; (c) retrieving from the computer memory, the cost associated with transportation of the identified product to the specified destination; and (d) calculating the total costs associated with transportation of the identified product to the specified destination. In an alternative embodiment, the method further comprises the step of (e) presenting the total cost to the requestor and (f) initiating transportation of the identified product to the specified destination.

In another alternative embodiment of the method, the step of calculating the total costs may comprise the steps of calculating the total costs according to one or more different modes of transportation. The information identifying the product may comprising any of the weight, size, product type, value, price or quantity data associated with the identified product. The costs associated with the transportation of the identified product comprises any of air freight, ocean freight, insurance, duties, taxes, custom clearance, fee or import fee cost data associated with a specific destination.

In accordance with a second aspect of the present invention, a method for providing a quote of the total costs of transporting a selected good to a specified destination comprises: (a) receiving from a requestor information identifying a good in a destination to which the good is to be transported; (b) retrieving values from a computer memory representing costs associated with transportation of the identified good to the specified destination; (c) computing the total cost of transporting the identified good to the specified destination; and (d) providing to the requestor the total costs of transporting the identified good to the specified destination.

In accordance with a third aspect of the invention, an apparatus comprises: (a) a processor; (b) a memory containing data describing a selected product and cost associated with transportation of the selected product to at least one destination; (c) a network interface capable of receiving from a requestor data identifying a selected product and specifying a destination to which the identified product is to be transported; and (d) program logic responsive to the data identifying the selected product and the specified destination and configured to determine the total costs of transporting the identified product to the specified destination.

According to a fourth aspect of the present invention a computer program product for use with a computer system operatively connectable to one or more requestor processes over a computer network comprises a computer usable medium having computer readable program code embodied therein, the computer program code comprising: (a) program code for maintaining in the computer system memory a description of a selected product and cost associated with transportation of the selected product to at least one destination; (b) program code for receiving from a requestor information identifying a selected product and specifying a destination to which the identified product is to be transported; (c) program code for retrieving from the computer memory the costs associated with pick-up, transportation, and delivery of the identified product to the specified destination; and (d) program code for calculating the total costs associated with pick-up, transportation, and delivery of the identified product to the specified destination.

In accordance with a fifth aspect of the invention, a method for generating quotations of delivered costs for shipment of selected products between locations comprises: (a) maintaining in a computer system memory a description of a selected product and the costs associated with transportation of the selected product to at least one destination; (b) maintaining in a computer system memory a plurality intermediate origin and destination pairs; (c) receiving from a requestor, over a communication network, information identifying a selected product; (d) receiving from a requestor, over a communication network, information identifying an initial origin and specifying a final destination between which the identified product is to be transported; (e) retrieving from the computer system memory, the cost data associated with transportation of the identified product to the specified final destination; and (f)

calculating the total cost associated with transportation of the identified product to the specified final destination.

According to a sixth aspect of the invention, an apparatus for enabling shipment of products to a destination comprises: a processor; a memory, coupled to the processor, the memory containing data describing a selected product and costs associated with transportation of the selected product to at least one destination, the memory further containing data defining a plurality intermediate origin and destination pairs; a network interface, coupled to the processor and the memory, the network interface capable of receiving, from a requestor, data identifying a selected product, an initial origin and a final destination to which the identified product is to be transported; and program logic responsive to the data identifying the selected product and the specified final destination and configured to determine the total cost of transporting the identified product to the specified final destination.

According to a seventh aspect of the invention, a computer program product for use with computer system operatively connectable to one or more requestors over a computer network, the computer program product comprising a computer usable medium having computer readable program code embodied thereon, the program code comprising: (a) program code for maintaining in a computer system memory a description of a selected product and the costs associated with transportation of the selected product to at least one destination and for maintaining a plurality of intermediate origin and destination pairs; (b) program code for receiving from a requestor information identifying a selected product and for identifying an initial origin and specifying a final destination to which the identified product is to be transported; (c) program code for retrieving from the computer memory, the costs associated with transportation of the identified product to the specified destination; and (d) program code for calculating the total cost associated with transportation of the identified product to the specified final destination.

BRIEF DESCRIPTION OF THE DRAWINGS

The above and other features, objects and advantages of the invention will be better understood by referring to the following detailed description in conjunction with the accompanying drawing in which:

Figure 1 is a block diagram of a computer system suitable for use with present invention;

Figure 2 is a conceptual block diagram of a network environment in which the system of the present invention may be implemented;

Figure 3 is a conceptual block diagram illustrating the elements of the inventive database in accordance with the present invention;

Figure 4A is a conceptual diagram of the record table heirachy and access parameters of the database of Figure 3A;

Figure 4B is a conceptual diagram of the Paired Port table of the database of Figure 4A ;

Figure 4C is a conceptual diagram of the Ocean Freight table of the database of Figure 4A ;

Figure 4D is a conceptual diagram of the Air Freight Table of the database of Figure 4A ;

Figure 4E is a conceptual diagram of the Product Classification table of the database of Figure 4A;

Figure 4F is a conceptual diagram of the Duty table of the database of Figure 4A;

Figure 4G is a conceptual diagram of the Tax table of the database of Figure 4A;

Figure 4H is a conceptual diagram of the In-land Zone table of the database of Figure 4A;

Figure 4I is a conceptual diagram of the Zone Rate table of the database of Figure 4A;

Figure 4J is a conceptual diagram of the Customs Clearance Table of the database of Figure 4A ;

Figure 4K is a conceptual diagram of the Country Code table of the database of Figure 4A;

Figures 5A-C collectively form a flowchart illustrating the processes of calculating the total delivered costs in accordance with the present invention;

Figures 6A-C are screen captures of the graphic user interface of the inventive transportation logistics server in accordance with the present invention; and

Figure 7 is a screen capture of the graphic user interface of the inventive transportation logistics server in accordance with the present invention.

DETAILED DESCRIPTION

As used in this specification, the term "requestor" may be any source which provides origin, destination and product information to the transportation logistics system of the present invention. As such, a "requestor" may be a network user connected directly to web server 260, a caller connected to the transportation logistic system 250 through the interactive voice response system, a network shopper connected from an eCommerce vendor's website, the actual eCommerce vendor of a product, a virtual shopping cart or any order processing process which provides origin or destination information for one or more products. Further, as used in this specification, the term "shopper" may be either a personal consumer, a business or other entity purchasing goods. In addition, the terms "good(s)", "product(s)" or "item(s)" are used interchangeably.

Fig. 1 illustrates the system architecture for a computer system 100 such as a Sun SparcStation 5 workstation, commercially available from Sun Microsystems of Palo Alto, CA, or an IBM RS/6000 workstation, or IBM Aptiva PC, both commercially available from International Business Machines Corp. of Armonk, NY, on which the invention may be implemented. The exemplary computer system of Figure 1 is for descriptive purposes only. Although the description may refer to terms commonly used in describing particular computer systems, the description and concepts equally apply to other systems, including systems having architectures dissimilar to Figure 1.

Computer system 100 includes a central processing unit (CPU) 105, which may be implemented with a conventional microprocessor, a random access memory (RAM) 110 for temporary storage of information, and a read only memory (ROM) 115 for permanent storage of information. A memory controller 120 is provided for controlling RAM 110.

A bus 130 interconnects the components of computer system 100. A bus controller 125 is provided for controlling bus 130. An interrupt controller 135 is used for receiving and processing various interrupt signals from the system components.

Mass storage may be provided by diskette 142, CD ROM 147, or hard drive 152. Data and software may be exchanged with computer system 100 via removable

media such as diskette 142 and CD ROM 147. Diskette 142 is insertable into diskette drive 141 which is, in turn, connected to bus 30 by a controller 140. Similarly, CD ROM 147 is insertable into CD ROM drive 146 which is, in turn, connected to bus 130 by controller 145. Hard disk 152 is part of a fixed disk drive 151 which is connected to bus 130 by controller 150.

User input to computer system 100 may be provided by a number of devices. For example, a keyboard 156 and mouse 157 are connected to bus 130 by controller 155. An audio transducer 196, which may act as both a microphone and a speaker, is connected to bus 130 by audio controller 197, as illustrated. It will be obvious to those reasonably skilled in the art that other input devices, such as a pen and/or tablet, Personal Digital Assistant (PDA), mobile/cellular phone and other devices, may be connected to bus 130 and an appropriate controller and software, as required. DMA controller 160 is provided for performing direct memory access to RAM 110. A visual display is generated by video controller 165 which controls video display 170. Computer system 100 also includes a communications adapter 190 which allows the system to be interconnected to a local area network (LAN) or a wide area network (WAN), schematically illustrated by bus 191 and network 195.

Operation of computer system 100 is generally controlled and coordinated by operating system software, such Windows 95 or Windows NT®, commercially available from Microsoft Corp., Redmond, WA. The operating system controls allocation of system resources and performs tasks such as processing scheduling, memory management, networking, and I/O services, among things. In particular, an operating system resident in system memory and running on CPU 105 coordinates the operation of the other elements of computer system 100. The present invention may be implemented with any number of commercially available operating systems including OS/2®, UNIX®, Linux, and Solaris®, among others.

One or more applications such as a web browser, for example, Netscape Navigator, version 2.0 and thereafter commercially available from Netscape Communications Corporation. and Internet Explorer, version 1.0 and thereafter, commercially available from Microsoft Corporation, Redmond, Washington, may execute under the control of the operating system .

Communication Environment

Fig. 2 illustrates a telecommunications environment in which the invention may be practiced, such environment being for exemplary purposes only and not to be considered limiting. Network 200 of Fig. 2 illustrates a hybrid telecommunication environment including both a traditional circuit switched network such as a Public Switched Telephone Network, and packet-switched data networks, such as the Internet and private Intranets, as well as apparatus bridging between the two. Not every element illustrated in Fig. 2 or described herein is necessary for the implementation or the operation of the invention.

As illustrated in Fig. 2, a global packet-switched network topology, illustrated as the Internet 205, interconnects various other computers in the network environment to the inventive transportation logistics system 250 of the present invention over a network. As will be understood by those skilled in the art, the Internet is essentially a network of networks which collectively form a global wide area network enabling processes at different network addresses, and typically in geographically disparate locations, to establish communication connections and to transmit data in a variety of formats. In the illustrative embodiment, any number of different transport protocols may be utilized between and among the various processes connectable across the Internet and private Intranets, e.g. Local Area Networks.

As illustrated in Fig. 2, in addition to transportation logistics system 250, a plurality of other computer systems 210, 220 A-B, 230, 240 and 250, 260, and 270 are coupled to the Internet 205. Each of these computer systems may be implemented with a computer architecture similar or equivalent to that described with reference to Fig. 1. Computer systems 210-270 may utilize any of a number of technologies known in the arts to connect to Internet 205. For example, computer system 220A, which represents a network user, may be connected to the Internet through a dial-up connection to an Internet Service Provider, not shown, such as America On-line or Compuserve. Computer system 220B, representing another network user, may alternatively be coupled to the Internet through a cable modem and broadband cable network infrastructure, also not shown. Computer system 210, representing a vendor having a web server to which network users may connect and purchase products, may be connected to the Internet utilizing frame relay technology and a high bandwidth connection, such as T1, T2 or T3 line. Computer system 230, representing a credit

processing server, and computer system 240, representing a shipping company computer, may be similarly connected to Internet 205 using any of the previously-described techniques or any other techniques known in the arts.

The transportation logistics system 250 comprises a web server 260, a database server 270 and database 280 operatively coupled, in the illustrative embodiment, with a private network 290, e.g., a packet-switched network, such as a Local Area Network executing the TCP/IP protocol. Web server 260 is also coupled to Internet 205, for example, via a T1 line. In an alternative embodiment, transportation logistics system 250 is further coupled over private network 290 to shipping computer system 240. System 250 may also be connected to a private Point of Sale (POS) network, not shown in Figs. 2-3, either through network 290 or externally through Internet 205.

In another alternative embodiment, the transportation logistic system 250 is further connected to a traditional circuit-switched telephone network 296 via an Interactive Voice Response (IVR) System 285 which is part of the transportation logistic system 250. In Fig. 2, a Public Switched Telephone Network (PSTN) central office 294 is operatively coupled to terminating apparatus 292A-B and IVR system 285. Although only one central office 294 is illustrated, it will be obvious to those skilled in the arts that multiple central offices may be operatively interconnected by, for example, a toll network implemented as a traditional PSTN network including routers, trunk lines, fiber optic cables, etc. Connected to central office 294 is a traditional telephone terminating apparatus 292A, which may be located at a shopper's premises, and terminating apparatus 292B, which may be located at a vendor's premises. Terminating apparatus 292A-B may be implemented with either a digital or analog telephone or any other apparatus capable of receiving a circuit switched call, such as modems, facsimile machines, etc., such apparatus being referred to collectively hereinafter as a terminating apparatus, whether the network actually terminates. Further, the PSTN network may be implemented as either an integrated services digital network (ISDN) or a plain old telephone service (POTS) network.

The above-described communication environment is for illustrative purposes only and is not meant to be limiting. The elements described herein may be operatively coupled through any combination of network configurations including, but

not limited to, wide area networks, local area networks, intranets, extranets, the Internet, broadband cable networks , or any combination thereof.

Transportation Logistic System Overview

Referring to Fig. 3, a conceptual block diagram of the transportation logistic system 250 in accordance with the present invention is illustrated. System 250 comprises a web server 260 coupled to Internet 205 as well as to a database server 270 through a private network 290. The database server 270, in turn, is coupled to database 280, as illustrated. Optionally, web server 260 may be coupled to a circuit-switched telephone network through IRV system 285. In addition, private network 290 may further couple both web server 260 and database server 270 to computer system 240, the computer system of a shipping entity.

In the illustrative embodiment, web server 260 performs the functions of a traditional web server enabling access to one or more web pages by other processes connected to Internet 205. In addition, web server 260 contains a computational engine module which utilizes data retrieved from database 280 to calculate the total global delivered costs for a particular product, as described hereinafter.

Web Server/Calculator Engine

Server 260 comprises a hardware platform 262 which may be implemented using a computer architecture similar to that illustrated with reference to Fig. 1. Hardware platform 262 includes a network interface for interfacing server 260 with the Internet, for example, through a T1 line. Hardware platform 262 may include an optional second interface for connecting server 260 to private network 290. Such an optional second interface may be implemented with an Ethernet LAN card or other LAN-based TCP/IP network connector. The hardware construction of such connectors and cards, as well as their appropriate drivers and protocols which implement the various transport protocol layers are well known within the art and will not be described herein in detail. Hardware platform 262 executes a computer operating system, such as Windows NT 4.0, available from MicroSoft Corporation, Redmond, Washington. Such an operating system is a multi-tasking operating system capable of executing multiple simultaneous threads of execution. Execution under the control of operating system 264 are one or more applications necessary for web

server 260 to perform its appropriate functions. Specifically, a total cost calculator engine 265 interfaces with a web page interface 266, IVR interface 267 and database interface 268. The total cost calculator engine performs the algorithm and processes to compute the total delivered costs for shipment of a product internationally as well as receives information from a requestor, whether a shopper or a vendor, and filters such information for transmission through to database server 270 and database 280. As used in this specification, the term "requestor" may be any source which provides origin, destination and product information to the transportation logistics system of the present invention. As such, a "requestor" may be a network user connected directly to website 260, a caller connected to the transportation logistic system 250 through the interactive voice response system, a network shopper connected from an eCommerce vendor's website, the actual eCommerce vendor of a product, a virtual shopping cart or any order processing process which provides origin or destination information for one or more products. In the illustrative embodiment, the functions performed by calculator engine 265 may be implemented either with object-oriented programming techniques using the appropriate class definitions and objects for values within the database, or, alternatively, using a non-object oriented language such as the UNIX programming language. The actual algorithms executed by calculator 265 are described in greater detail hereinafter.

Web page interface 266 functions to render pages to requestors connecting to the web server 260 and to pass data received from a requestor to calculator engine 265 through the appropriate Application Program Interfaces (APIs). In the illustrative embodiment, the web page interface 266 utilizes a plurality of Visual Basic script files to create active web pages. In the illustrative embodiment, such an implementation may be achieved using Microsoft's Internet Information Services Version 4.0, commercially available from Microsoft Corporation, Redmond, Washington.

Web server is accessible over a packet-switched data network, such as the Internet/Intranet 220 and retains in memory thereof one or more "pages" which collectively may comprise a website used to visually present the information on the pages. One or more of the pages accessible on web server 260 may contain address information in the form of a Hypertext Markup Language (HTML) tag which may be downloaded over the Internet 205 to a browser process executing on any of the systems 210- 240. Such HTML tag may include the IP address or E-mail address

associated with the website. Server 260 may also function as a proxy server for LAN 290 to which computer 260 may connected via a LAN-based TCP/IP network connector .

Database interface 268 functions as the interface between calculator engine 265 and database server 270. Database interface 268 may be implemented with the appropriate Remote Procedure Call library which enables the interface to make remote procedural calls to database server 270 and to service calls received from database server 270.

IVR interface 267 serves to pass information to and from calculator engine 265. In the illustrative embodiment, interface 267 receives data signals from IRV module 285 and supplies them through the appropriate APIs to calculator engine 265. Interactive Voice Response (IVR) module 285 may include a processor that executes text-to-speech synthesis programmed instructions designed to use ASCII input, to generate a "read aloud" audio prompts of that ASCII input in a machine synthesized voice. Also included in IVR module 285 is logic to respond to touch-tone commands from a caller. In particular, IVR module 285 is configured to translate the Dual Tone Multi-Frequency (DTMF) signal received from a requestor to a machine-readable format, such as ASCII, that is recognizable by database 280. Alternatively, IVR module 285 may include a word recognition unit that is configured to output digitally recorded words that is converted to ASCII format for delivery to database 285. The construction, function and implementation of an IRV interface suitable for use in the present invention including the appropriate device driver and protocol are within the scope of those reasonably skilled in the arts.

Data Base Architecture

Database server 270 and database 280 comprise the system by which the database information and data structures of the present invention are implemented. Specifically, database server 270 comprises a database hardware platform 272, an operating system 274 and a database query application 276. In the illustrative embodiment, hardware platform 272 is implemented with a computer system similar to that described with reference to Figure 1. Operating system 274 may be implemented with Windows NT 4.0. The database query application 276 may be implemented with any number of commercially available database search query language engines, such

as Microsoft SQL Server Version 7.0. also commercially available from Microsoft Corporation. The structure of information, including the data structure, records and various data use to access records as described hereinafter may also be designed and implemented using MicroSoft SQL Server Version 7.0.

As described previously, web server 260 and database server 270 are operatively coupled through a private network, such as a transmission Control Protocol/Internet Protocol (TCP/IP) based network. Query engine 276 receives information from web server 260 in the form of a query and supplies the query to database 280. The structure and organization of records within database 280 is set forth in greater detail with reference to Fig. 4A-K. Database server 270 and database 280 may communicate using SQL standard database query language. The SQL standard is published by the American National Standards Institute (ANSI). The database engine application 276 comprises a set of objects and or code that filter the queries received from web server 260, such filters useful in focusing or customizing the scope of a database query. The information retrieved from database 280 is forwarded by database server 270 to web server 260 using remote procedural call libraries such as that previously described.

Referring to Figs. 4A-K, the arrangement of data within database 280 is illustrated conceptually. Specifically, Fig. 4A illustrates the arrangement of tables 405-490 as well as the interrelationship between the various tables. To further a better understanding of the architecture of database 280, each table, as well as its corresponding entries, is described in greater detail below.

As illustrated, database 280 comprises a Country Code Table 405, a Paired Port Table 410, an Ocean Zone Charge Table 420, an Air Zone Charge Table 430, a Customer Clearance Table 440, a Product Classification Table 450, a Product-Specific Duty Table 460, a Tax Table 470, an Inland Zone Classifier Table 480 and a Zone Rate Table 490. Optionally, database 280 may further comprise Tables 495A-E which contain information specific to the products and offerings of one or more eCommerce vendors. Such information may be arranged by vendor and may include product identifiers, product dimensions and weights, product descriptions, product values, etc.

Prior to discussing the interrelations between the data in Tables 405-490, each table is described individually below. Country code table 405 is illustrated in Fig. 4K

and comprises a plurality of entries for each of the countries accessible by ocean, air or land freight. Each entry of Table 405 includes a country code variable 405A and a country name variable 405B. Country code variable 405A may be implemented with either a long or short integer variable. The actual identification scheme utilized to identify each country may be determined at the designer's discretion and is not limited to the coding scheme illustrated which mimicks telephone dialing country codes. The country name field 405B of each entry may be implemented with an alphanumeric character string as will be obvious to those skilled in the arts. Table 405 is not limited to those specific countries identified therein but may include any country accessible by ocean, air or land transportation. As will be explained hereinafter, a process requesting a total delivered cost quote from the transportation logistic system 250 of the present invention will provide either an alphanumeric description of the destination country, and, optionally, the origin country, similar to country name variable 405B, or a country code variable, similar to country code 405A to web server 260, as explained hereinafter.

Fig. 4B is a conceptual diagram of paired port table 410 of database 280 is illustrated. Paired port table 410 functions to define the ocean zone charge and air zone charge between all possible combinations of origin and destination ports as explained hereinafter. In the illustrative embodiment of the present invention, a requestor of the total cost delivered quote is able to provide information specifying both an origin location at which goods are to be picked-up and a destination location to which such goods are to be delivered. Between the specified origin and destination there may exist any number of interim or intermediate locations through which the goods may pass during the shipping process. Paired port table 410 serves, therefore, to pair these locations or entry/exit points, e.g. major cities throughout the globe which may serve as intermediate destinations or origins in the transportation process. In the illustrative embodiment, a country may have at least one "port". Accordingly, given *n* countries within the transportation logistic system, table 410 may have , in the illustrative embodiment, *n* x *n* possible entries, which represents a pairing of every port within the transportation logistic system with every other port.

Referring to table 410, each of the plurality of entries of table 410 includes an origin port field 410A, a destination port field 410B, an ocean zone charge field 410C, an air zone charge field 410D. Each of fields 410A-D may be implemented with either

a long or short integer value. As will be explained hereinafter, the values for the origin port field 410A and destination port field 410B are used to identify the international segment of a delivery and the zones associated with either air transportation or ocean transportation. A value for origin port 410A is utilized as an index into table 410, as is a value for destination port 410B. The values of ocean zone charge 410C and air zone charge 410D from the appropriate entry of table 410A identified by the provided values of fields 410A and 410B are utilized as indices into tables 420 and 430, as explained hereinafter.

Referring to Figure 4C, a conceptual diagram of ocean zone charge table 420 is illustrated. Each entry of table 420 comprises a zone field 420A, a rate field 420B and a service fee field 420C. Field 420A may be implemented with either a long or short integer value. Fields 420B and 420C may be implemented with real number variables. In the illustrative embodiment, the value of the ocean zone charge field 410C is used as an index to table 420 and identifies an appropriate entry. The rate field 420B identifies the dollar per unit volume/weight. The service fee field 420C identifies a flat service charge for delivery. To calculate the ocean freight charge the value of the rate field 420B is multiplied by the unit(s) of volume/weight and the result added to the value of the service fee field 420C, as explained in greater detail hereinafter.

Referring to Figure 4D, a conceptual diagram of air zone charge table 430 is illustrated. Each entry of table 430 comprises a zone field 430A, a service fee field 430B, multiple a rate fields 430B-G and insurance field 430H. Field 430a may be implemented with either a long or short integer value. Fields 430B-H may be implemented with real number variables. In the illustrative embodiment, the value of the air zone charge field 410D is used as an index to table 430 and identifies an appropriate entry. The service fee field 430B identifies a flat service charge for delivery. The rate fields 430C-H identify the dollar per unit volume/weight for various weight categories. For example, rate fields 430C, 430D, 430E, 430F, and 430G identify the dollar per unit volume/weight rates for weights under 10 lbs., 50 lbs., 100 lbs., 500 lbs., and over 500 lbs., respectively. To calculate the air freight charge the value of the appropriate rate field 430C-H is multiplied by the unit(s) of weight and the result added to the value of the service fee field 430B, as explained in greater detail hereinafter.

Referring to Figure 4E. a conceptual block diagram of Product Classification Table 450 is illustrated. Each entry of Table 450 includes a product description 450A and a tariff code 450B. In the illustrative embodiment, the product description 450A may be implemented as an alpha numeric character string while the tariff code field may be implemented with either a short or a long integer value. In the illustrative embodiment, product description field 450A may be implemented in a number of multi-lingual variation as illustrated. In Figure 4E, some of the entries are listed in both Spanish as well as English. The classification of products in the present invention is based both on classifications of international customs authorities as well as empirically derived variations thereof. The value of a tariff field 450B is used as an index into duty table 460 as explained hereinafter. The product description information received from a requester is used as an index into Table 450. The corresponding tariff field 450B is then used as an index into duty table 460, as explained hereinafter.

It will be obvious to those reasonably skilled in the art that the product description field 450 may be implemented either with an alpha numeric description or with a code in the form of an integer variable, the use of an alpha numeric description facilitates a translation of the product description values into multiple natural languages. Alternatively, where a particular vendor's entire inventory is categorized in conjunctions with database 280, as explained hereinafter, the use of a specific code may be utilized for greater efficiency.

Referring to Figure 4F, a conceptual diagram a Product-Specific Duty Table 460 is illustrated. Each entry of table 460 comprises a tariff code field 460A, a country code field 460B, a duty description field 460C, a percent field 460D, a mount field 460E and a duty order field 460F. Tariff code field 460A and country code field 460B may each be implemented with a long or short integer value. Duty description 460C may be implemented with an alpha numeric character string variable. Each of percentage field 460D, amount field 460E and duty order field 460F may be implemented with real numbers. In the illustrative embodiment, the tariff code 450B is used as an index into table 460. Some tariff codes will index into multiple entries of table 460. For example, the tariff code "3303" indexes into the first two entries of table 460. The first entry represents the duty at zero percent and the second entry represents a flat duty fee. The country code field 460B identifies the destination country to which the goods will be transported.

Referring to Figure 4G, a conceptual diagram of a Tax Fee table 470 is illustrated. Each entry of table 470 includes a country code field 470A, a description field 470B, a percent field 470C, an amount field 470D and an order field 470E. Country code field 470A may be implemented with either a long or short integer variable. Description field 470B may be implemented with an alpha numeric character string. Amount Field 470D is a flat cost per transaction and may include the value added tax at a certain percentage as well as port fees, custom warehouse service fees, airport fees, currency exchange fees, etc. Percent field 470C represents the percent of the tax paid on the value of the product as explained hereinafter. Amount field 470D represents a fixed amount required for a tax. Order field 470E represents the order in which a series of entries of table 470 are to be computed. For example, five entries relate to the tax for the country identified by code "591", i.e. Bolivia. The entry having a country code field value of 591 and an order field value of 10 is calculated first indicating an inspection fee of 1.92 percent of the FOB value as first computed. The next subsequent entry with an order field value of 20 is next used to calculate a custom brokers charge of two percent (2%), etc. until all components of the tax for all entries having order field 10-50 have been computed. In this manner, where a particular country or sovereignty has a complex system for computation of value added taxes and other fees, etc., multiple entries within table 470 may be utilized and the results aggregated to achieve the appropriate amount of tax. Percent field 470C, amount field 470D and order field 470E may all be implemented with real number variables.

Referring to Figure 4H, a conceptual diagram of the In-land zone classifier table 480 is illustrated. In-land zone classifier table 480 is used to compute the cost of transporting goods from one of the paired ports to another point of pick-up or delivery within the same country. The table is set up so that most major worldwide city can be used as a point of pick-up or ultimate delivery. Specifically, table 480 comprises a country code field 480A, a city identifier 480B, a city field 480C, a state field 480D and a zone field 480E. Fields 480A, B and E may be implemented with long or short integer values while fields 480C and D may be implemented with alpha numeric character string variables. In determining the costs for shipment from an entry point t to an inland destination, a value for country code as specified by a requester is utilized as an index into table 480. ID code 480B is an internal identifier utilized to identify

various destinations within a particular country. The value of the zone field 480E is utilized as an index into table 490 to determine the appropriate inland freight fee, as explained hereinafter. For countries that do not have individual states, the value of the state field 490D may be left blank as indicated.

Referring to Figure 4I, conceptual diagram of zone rate table 490 is illustrated. Each entry of table 490 may comprise an identifier field 490A, a city field 490B, a country identifier 490C, a zone code field 490D, a rate field 490E, a service fee field 490F and an insurance field 490G. Fields 490Aand 490D may be implemented with either long or short integer variables. Fields 490E-G may be implemented with real number variables. The zone field 480E from table 480 and is used as an index into table 490 to identify the appropriate at which the inland zone rate is to be calculated, as explained hereinafter. The rates in the rate field for 490E are specified in rates per 100 lbs. or kilos and in the foreign currency appropriate for the designated value of the country code for 490C field. These rates will then be supplied to a currency converter module or service at the time of calculating the total delivered cost, as explained hereinafter in greater detail.

Referring to Fig. 4J, a conceptual diagram of a custom clearance table 440 is illustrated. Each entry of table 440 includes a country code 440A, a description field 440B, a city code field 440C, a minimum range value field 440D, a maximum range value field 440E, a customs percentage field 440F and a service fee field 440G. The country code field 440A and city code field 440C may be implemented with either a long or short integer variable. Description field 440B may be implemented with an alpha numeric character string. The minimum range value field 440D and maximum range value field 440E collectively define a value range having a customs percentage associated therewith and into which the values of CIF(air) or CIF(ocean) are mapped. Amount field 440D describes the nature of the custom clearance and may include the custom clearance fee and a certain percentage. The customs percentage field 440F, minimum range value field 440D, maximum range value field 440E and service fee field 440G may all be implemented with real number variables. Percent field 440F represents the percent of clearance fees paid on the CIF value for air and ocean, as explained hereinafter. The service fee field 440G represents a fixed amount in addition to the custom fees.

Web Server/eCommerce Vendor Communications

All quote requests are sent to the server 260. In the illustrative embodiment, each vendor is provided with a unique URL at web server 260. URL's are not shared. An example of an eCommerce vendor's URL is set forth below, with www.From2.com being the URL for web server 260:

http://www.From2.com/VendorNameHere/Quote.asp

In order for the calculator engine 265 to calculate a quote, the eCommerce vendor must provide server 260 with certain data parameters with every request. Such parameters can be submitted from an HTML form with the GET method or appended at the end of a URL request. All submitted data parameters pertain to the items in a shopping cart. The request contains two sections, as set forth below. The following are the basic parameters that are needed by web server 260 to process a complete delivery quote:

(1) Origin and Destination Information Section

Vid	Vendor Id Number (provided by the shipping company; must be sent with every request)
Ship-Country	Destination Country Name
Ship-City	Destination City Name
Item-Count	Total number of different items (pieces) in the shipment (not per box)

Optional Parameters:

Origin-City	City, State or Province of Origin
Origin-Country	Country of Origin

(2) Product/Item Information Section

The following section is repeated for each item individually (number increases by one after each item):

Sku1	Stock Keeping Unit/Item number of first item
Qty1	Quantity of first item type
Val1	Value/Price of one item of the first product type

Below are examples the format of the data parameters as would be transmitted from an eCommerce vendor to web server 260:

Example 1:

http://www.From2.com/VendorNameHere/Quote.asp?Ship-City=Lima&Ship-Country=Peru&Item-Count=1&Sku1=ABCD1234&Qty1=2&Val1=109.82

In Example 1 above, the destination is Lima, Peru. Only one item (Item-Count=1) with a quantity of two (Qty1=2) is being ordered for item number Sku1=ABC1234 at a price of Val1=109.82 each.

Example 2:

http://www.From2.com/VendorNameHere/Quote.asp?Ship-City=Dublin&Ship-Country=Ireland&ItemCount=2&Sku1=XYZ5677&Qty1=1&Val1=99.00&Sku2=EFG0987&Qty2=1&Val2=150.99

In Example 2 above, the destination is Dublin, Ireland. Two different items (Item-Count=2) are being ordered - - one with a quantity of one (Qty1=1) is being ordered for item number Sku1=XYZ5677 at a price of Val1=99.00, and the other with a quantity of two (Qty2=2) is being ordered for item number Sku2=EFG0987 at a price of Val2=150.99 each.

It will be obvious to those reasonably skilled in the arts that parameters may be added, deleted, or modified to include other variables, as needed for a particular eCommerce vendor. Certain eCommerce vendors use specific and/or proprietary web development tools or eCommerce packages. Some of these tools and packages may not allow the developer to output/send product information sequentially as described Section (2) above (Sku1, Qty1, Val1, Sku2, Qty2, Val2, etc.) or to retrieve all of the quote information. In such cases, the quote process can be customized to accommodate the eCommerce vendor's needs. Upon request, web server 260 can also process a vendor's HTML form using the "POST" method instead of "GET". If an eCommerce vendor ships products from only one location, the web server 260 defaults to that location as point of origin for all quotes. If the eCommerce vendor ships from more than one location, the eCommerce vendor must provide a City/State & Country of Origin as extra parameters in the request.

After the request is received, the calculator engine 265 uses the data parameters to calculate the global delivered cost, as described hereafter with reference to Figs 5A-C, and transmits the following information to a URL provided by the eCommerce vendor:

ShipAmnt	Freight and insurance cost
TaxAmnt	Amount for taxes and duties
QuoteId	Quote Id/Tracking Number
ErrNumber	Error number if an error occurs during the quotation process. (ErrNumber = 0 means that no errors occurred)
ErrMsg	Error message/description for the error number

If, during the buying process, the shopper adds, changes or deletes items in an order already quoted, the eCommerce vendor must request a new quote from the web server 260. Once the buyer decides to purchase the products as quoted, the eCommerce vendor must post all of the buyer's information (name(s), delivery address, credit card data (if required) and the QuoteId for tracking purposes) so that the shipping company can initiate the pickup, packaging (if required) and delivery process.

The entire quote process is completely transparent and seamless to the shopper. The shopper is never taken to, and is completely unaware of web server 260. The shopper will stay at the eCommerce vendor's web site at all times.

Calculator Engine

Figure 5A-B collectively form a flowchart of the process steps performed by the inventive system in order to provide a global delivered cost quote to a requestor. Using data retrieved from the previously described tables of database 280, calculator engine 265 executes the following algorithms:

Global Delivered Cost Algorithm: PC + DDP + FD + Cstm =From2

Origin Algorithm: Q (Zf(DW) = PC

Int'l Algorithm Ocean: $[Q(IW^{*}OFx_2)]$+ Fee + (Ins)V + V=CIF

Int'l Algorithm Air: $[Q(IW^{*}Afx_2)]$+ Fee + (Ins)V + V=CIF

Duty Algorithm: $(CIF^{*}Px_3)$ = Rduty

Taxes Addition Algorithm: [Q(CIF*Rduty)]*(TF1 + TF2 + TF3 + TF4) = DDP

Foreign Delivery Algorithm: $(IW*DCx_4)*CC=FD$

Customs Clearance Algorithm: (Cclr * CIF) + Fee = Cstm

Where x_n has a value as defined in relation to a specific table. as explained herein after and wherein the other variables have the following definitions:

Q = Quantity of item selected

Z = precarriage Zone

PC = Precarriage Cost by freight unit

CT = Country table

DW = Domestic Weight

IW = International Weight

V = Value per item

CI = Cubic inch

OF = Ocean freight

AF = Air freight

Zf = Foreign inland Zone

DC = foreign delivery cost, by freight unit

CC = Currency Conversion

TF1 = Tariff 1 for country

TFn = Tariff n for country

Cclr = Customs Clearance percentage

Cstm = Customs Clearance cost

The values from database 280 retrieved by calculator engine 265 may be stored temporarily in memory until needed to perform the appropriate calculations.

The process of obtaining a global delivered cost quote using the inventive system 250 is described with reference to Figs. 5A-B. Specifically, calculator engine 265 receives, either directly from a network shopper connected to website 260, or from a user process hyperlinked from a vendor's website, input data which includes the origin city, origin country, destination city, and destination country 502-504. In the event the information is received from an eCommerce vendor's web site, the

information may be transferred over either a public or private computer to web server 260 in the format previously described. If the requestor is a network user connected to web server 260, the user will be prompted to input the information from the graphic user interface or one or more web pages, as illustrated in Figs. 6A-C. Such information may be entered through the graphic user interface with dialog boxes, menus or other interface entities that facilitate entry of the necessary information to obtain a quote. In the above instances, the input data is transferred to calculator engine 265 via API's in the web page interface 266. Alternatively, if the requestor is a caller coupled to system 250 via IVR module 285, the caller will be prompted to enter the same information using either DTMF input selections or voice prompts if the IVR system is implemented to use voice recognition technology. The IVR module 285 transfers the data to calculator engine 265 via API's in the IVR Interface 267.

Calculator engine 265 utilizes the values of the received origin city and country as indexes into in-land zone table 480 to identify the appropriate entry having matching country fields 480A and city fields 480C. The zone field 480E of the identified entry is then used as an index, along with the country code field 480A, into the zone rate table 490. The zone rate table 490 establishes a rate, in local currency, as well as the service fee and any insurance fee for the inland freight portion of the shipment to a port in the origin country. These steps are illustrated by procedural step 508. Similarly, calculator engine 265 utilizes the values of the received destination city and destination country as indexes into in-land zone table 480 to identify the appropriate entry having matching country fields 480A and city fields 480C. The zone field 480E of the identified entry is then used as an index, along with the country code field 480A, into the zone rate table 490, as illustrated by procedural step 508. The zone rate table 490 establishes a rate, in local currency, as well as the service fee and any insurance fee for the inland freight portion of the shipment to a port in the destination country. These steps are illustrated by procedural step 510.

Next, the received value of the origin country and destination country values are used as indexes into the origin port field 410A and destination port field 410B of paired port table 410 to identify a matching entry. The identified entry reflects the most efficient route between the paired destination and origin ports, as designated by procedural blocks 512.

The ocean zone charge field 410C of the identified entry of table 410 is then used as an index into the ocean zone charge table 420. The values for the rate field 420B and service fee field 420C from table 420 are retrieved from database 280. Similarly, the air zone charge field 410D of the identified entry of table 410 is used as an index into the air zone charge table 430. The values for the service fee field 430B, the appropriate weight-based tariff field 430C-G and insurance field 430H from table 430 are retrieved from database 280. These steps are collectively illustrated by procedural step 514.

Next , if any of the rate values retrieved in the prior steps were in local currency, the appropriate rate is then supplied by calculator engine 265 to a currency conversion module for conversion to U.S. dollars, as specified by procedural step 516. The currency conversion module may be implemented with any number of commercially available applications executing on web server 260. Alternatively, currency conversion services may be supplied to system 250 by an online service over either a public or private computer network, such services being updated more frequently. Such an on-line currency conversion service, suitable for use with the present invention is Oanda.com of New York, New York or RateStream.com.

Next, description of at least one item, including the dimensions and weight of the item, and a quantity description of the selected item are obtained, as specified by procedural steps 517. If the requestor is a network user connected directly to webserver 260, the user will be prompted through the graphic user interface of the appropriate web pages to specify the weight for the item in either pounds or kilograms and the dimensions of the item in either inches or centimeters. Alternatively, if the requestor is a process redirected from an eCommerce vendor's website, the Sku1 values , e. g. the product identifier previously described, may be used as a index into one of table 495A-E of database 280 specifically containing information about vendor's products and offerings. The product identifier may be used to access the weight, dimensions, or other data associated with the selected product from the vendor database. In the illustrative embodiment, a vendor that wishes to obtain quotes for its customers will have provided, during a registration or set-up phase, a table that associates the product identifiers for items offered with the weight, dimensions, value and description of that product. Such a database may be integrated into database 280 or may be implemented as a separate database remotely

accessible over either a public or private network. Still alternatively, a database including the product descriptions, weights, dimensions and values for items commonly purchased may be utilized. The process of obtaining information pulled from either a product database or as supplied by the requestor, is illustrated by procedural step 518.

Using the received values and dimensions for a specified item, the domestic freight (DW), ocean freight and international freight (IW) are calculated by calculator engine 265, as specified by procedural block 520, and in accordance with the formulas set forth below:

DW=>Actual or (CI/195 for (lb) or CI/395 for (Kg)
IW=>Actual or (CI/166 for Kg) or CI/366 for (lb))
Ocean IW=CI/61,015.68

Next, the Precarriage Cost (PC) or the cost by freight unit to ship the selected product from a designated origin to an international port is computed in accordance with the Origin Algorithm below and using the previously retrieved values from database 280, as indicated by procedural step 522:

$$PC=Q\ (Zf\ (DW))$$

where DW is the Domestic Weight of the selected product and Q is the quantity of the selected product, and Zf is the Foreign inland Zone.

Next, the product volume is calculated from the product's size as indicated by procedural step 523. The Volume Per Pound for Domestic freight, Vpp(d), and the Volume Per Pound for International freight, Vpp(i), is calculated according to international standards as follows:

$$Vpp(d)= volume/195$$
$$Vpp(i)= volume/166$$

In order to determine the domestic weight of the product, the Vpp(d) is compared to the weight of the product from the database and the largest value may be used as the

domestic weight. Identically, the Vpp(i) is compared to the weight of the product from the database, and the largest value is used as the international weight. The selection of the domestic weight and the international weight (IW) may be based on the greatest revenue producing number, i.e. either the space that the package occupies or the actual weight of the package.

After the calculation of the domestic weight, product volume and the precarriage cost, the cost of ocean freight (CIF(ocean)) is computed in accordance with the International Algorithm set forth below and using the previously computed values for ocean IW, as specified by procedural step 524:

$$[Q(IW*OFx_2)]+ Fee+ Ins(V)+V=CIF(ocean)$$

Thereafter, the cost of air freight (CIF(air)), is computed in accordance with the international algorithm set forth below and using the previously computed values for IW, as specified by procedural step 525:

$$[Q(IW*AFx_2)]+ Fee+ Ins(V)+V=CIF(air)$$

In the above algorithms for CIF(air) and CIF(ocean), Q represents the quantity of the selected product, V represents the value cost of the selected product, Fee represents the service charge of the transportation logistic server (see table 420 or 430 as applicable), Ins represents the insurance rate (see table 430), AF represents the cost of air freight, OF represents the cost of ocean freight, and x_2 is the rate per rate unit weight from tables 420 and 430, respectively, as applicable. The illustrative system uses a minimum volume industry standard of one cubic meter to calculate the ocean freight. For example, if the selected product is smaller than one cubic meter, the CIF(ocean) result will be calculated using a volume equal to one cubic meter, which may make the CIF(ocean) cost disadvantageous.

Next the values of Rduty(air) and Rduty(ocean) are computed in accordance with the duty algorithm set forth below and using the previously computed values for CIF(air)and CIF(ocean), as specified by procedural step 526:

$$Rduty(air)=duty\ percent \times CIF(air)$$

Rduty(Ocean)=duty percent x CIF(ocean)

To determine the duty percent, the product code of the selected product (or its type) is determined from the vendor database. Alternatively, the product code may be selected by a network user from a menu on web page of web server 260. The product code is used to access the tariff code, field 450B, of the selected product in product table 450. The tariff code and country code are used as indexes into duty table 460 to determine the correct duty percent field 460D. For example, a product code matching field 450A of product table 450 of Fig. 4E shows that baby garments have a tariff code 6111. The tariff code and country code are indexed into matching field 450A and 450B the duty table 460 of Figure 4F, respectively, to indicate that tariff 6111 has a duty of 16% for the country code 01 (United States).

Next the value of the taxes or duty delivered paid (DDP) is computed in accordance with the Taxes Addition Algorithm as set forth below and using the previously computed values for CIF(air), CIF(ocean), Rduty(air) and Rduty(ocean), as specified by procedural step 528:

[Q(CIF(air)*Rduty(air))]*(TF1 + ...+ TFn) = DDP(air)
[Q(CIF(ocean)*Rduty(ocean))]*(TF1 + ...+ TFn) = DDP(ocean)

where the tax fee is the sum of a number of tax fees that a particular country charges to import a selected product. The country code is used as an index into tax table 470 to determine the correct taxes from fields 470B-E. The first digit of the order field 470E is used to designate the entry number for a particular country. For example, country code 591(Bolivia) has five consecutive entries in field 470E, 10-50, indicating there are five consecutive fields 470B describing various taxes for products entering the country. Note, the tax fees may include a duty tax, administrative tax, value added tax, or excise or luxury tax, as applicable to a specific country.

Next the customs clearance fees, Cstm(air) and Cstm(ocean) are computed using the previously computed values for CIF(air)and CIF(ocean), in accordance with the Customs Algorithm set forth below, and as specified by procedural step 530.

Cstm(air)= (custom percent x CIF(air)) + surcharge fee

Cstm(ocean)= (custom percent x CIF(ocean)) + surcharge fee

To determine the customs percent, the country code is used as an index into Customs table 440 to determine the correct duty percent field 440D. The value of either the CIF(air) or CIF(ocean) is compared to the minimum range field 440D and maximum range filed 440E and the values of fields 440F and 440G of the appropriate entry of table 440 utilized to calculate the custom clearance fees

Next, the foreign delivery (FD) or the cost to ship the selected product from the destination port, as specified in field 410B of paired port table 410, to the destination city, is computed in accordance with the Foreign Delivery algorithm below, and as indicated by procedural step 532:

Foreign Delivery Algorithm: (IW*DCx)*CC=FD

where IW represents the international weight of the selected product, CC represents the currency conversion rate, and DC represents the foreign delivery costs by freight unit, and x_4 is the rate per weight unit from table 490. The foreign currency conversion may be obtained using any of the previously described techniques.

Finally, the total global delivered cost for air freight and ocean freight are computed in accordance with the Global Delivered Cost Algorithm set forth below and using the previously computed values for precarriage cost (PC), duty delivered paid (DDP), and foreign delivery freight (FD), as specified by procedural step 534:

Global Delivered Cost Algorithm (Air): PC+DDP(air)+FD+Cstm =From2

Global Delivered Cost Algorithm (Ocean): PC+DDP(ocean)+FD+Cstm =From2

The total delivered cost quotes for air and ocean freight are then stored temporarily in memory, as specified by procedural step 536, and the process repeated based on the number of items either designated by the user or in the "shopping cart" associated with the process from the vendor's website, as specified by decisional step 538. Finally, the delivery costs for all items are summed and a cumulative total delivered cost of all items by both air freight and ocean freight is provided to the requestor, as designated by procedural step 540. Step 540 may entail transferring the total

delivered cost quote to the graphic user interface of the webpage for viewing by a directly connected network user. Figure 7 illustrates a sample quote that is used to illustrate the cost to ship a group of products consisting of a fax machine, two computers and computer accessories from Miami to Belgium. Alternatively, presentation may entail transmitting the total delivered cost quote to the vendor website for presentation to a process shopper at the vendor's website. In such an instance, the quote data may be transferred to the vendor web site using an FTP data string and may contain the information, as previously described. Still alternatively, presentation may entail converting the total delivered cost quote to an audio signal for delivery to a requestor who is connected to the transportation delivery system 250 via IVR module 285 and a telephony connection.

If the shopper or network user accepts the quote, as illustrated by decisional step 542, the process is transferred along with data identifying the quote, typically via hyperlink, to computer 240 of the shipping company over either a public or private network. Computer system 240 is configured to receive and process payment, pick-up and delivery information, for example in conjunction with credit processing computer 230, and initiate pick-up and delivery of the product(s) to/from the designated origin and destination, as illustrated by procedural step 544 and 546, respectively. In addition, once a product shipment order has been received, computer system 240, in conjunction with web server 260 enables the requestor to track or monitor the status of the shipment, in a manner understood by those skilled in the arts. The structure, user interface, and functions of credit processing computer 230 necessary to receive and process payment information are within the understanding of those skilled in the arts. Similarly, the structure, user interface and functions of computer 240 necessary to receive and process pick-up and delivery information, as well a initiate pick-up and delivery of a product, are within the understanding of those skilled in the arts. Alternatively, web server 260 may be configured to perform the functions of computers 230 and 240 within the same system. If the quote is not accepted, the process is terminated, as illustrated by procedural step 550.

The reader will appreciate from the foregoing description that the inventive transportation logistics system enables prospective purchasers or bailors to determine the exact costs, in real time, of having a product shipped between any

specified origin and destination worldwide, and, further, to initiate and pay for such shipment at the same time and through the same on-line process.

The above-described invention may be implemented in either all software, all hardware, or a combination of hardware and software, including program code stored in firmware format to support dedicated hardware. A software implementation of the above described embodiment(s) may comprise a series of computer instructions either fixed on a tangible medium, such as a computer readable media, e.g. diskette 142, CD-ROM 147, ROM 115, or fixed disk 152 of Figure 1, or transmittable to a computer system in a carrier wave, via a modem or other interface device, such as communications adapter 190 connected to the network 195 over a medium 191. Medium 191 can be either a tangible medium, including but not limited to optical or analog communications lines, or may be implemented with wireless techniques, including but not limited to microwave, infrared or other transmission techniques. The series of computer instructions whether contained in a tangible medium or a carrier wave embodies all or part of the functionality previously described herein with respect to the invention. Those skilled in the art will appreciate that such computer instructions can be written in a number of programming languages for use with many computer architectures or operating systems and may exist in machine executable format. Further, such instructions may be stored using any memory technology, present or future, including, but not limited to, semiconductor, magnetic, optical or other memory devices, or transmitted using any communications technology, present or future, including but not limited to optical, infrared, microwave, or other transmission technologies. It is contemplated that such a computer program product may be distributed as a removable media with accompanying printed or electronic documentation, e.g., shrink wrapped software, preloaded with a computer system, e.g., on system ROM or fixed disk, or distributed from a server or electronic bulletin board over a network, e.g., the Internet or World Wide Web.

Although various exemplary embodiments of the invention have been disclosed, it will be apparent to those skilled in the art that various changes and modifications can be made which will achieve some of the advantages of the invention without departing from the spirit and scope of the invention. It will be obvious to those reasonably skilled in the art that other components performing the same functions may be suitably substituted. Further, the methods of the invention may be achieved in

either all software implementations, using the appropriate processor instructions, or in hybrid implementations which utilize a combination of hardware logic and software logic to achieve the same results. Additionally, the method of providing the cost of shipping may be used for any delivery destination or origin location in the world including the case where both origin and delivery are located within the same country. Also, the system of the present invention may provide the requestor with additional information that pertains to the shipment of a selected product. This information may include for instance, laws that prohibit the shipment of certain products into a particular country. Further, in the data base actual values may be replaced with integer codes or pointers where applicable.

What is claimed is:

1. A method for enabling transportation of selected products between locations comprising:

(a) maintaining in a computer system memory (280) a description of a selected product and the cost data associated with transportation of the selected product to at least one destination;

(b) receiving from a requestor, over a communication network (205), information identifying a selected product and specifying a destination to which the identified product is to be transported;

(c) retrieving from the computer system memory (280), the cost data associated with transportation of the identified product to the specified destination; and

(d) calculating the total cost associated with transportation of the identified product to the specified destination.

2. The method of claim 1 further comprising:

(e) providing the total cost to the requestor.

3. The method of claim 2 further comprising:

(f) receiving from a requestor commands to initiate transportation of the identified product to the specified destination.

4. The method of claim 1 further comprising:

(e) receiving from a requestor information specifying an origin from which the identified product may be received.

5. The method of claim 2 further comprising:

(f) receiving payment of the total cost for transporting the identified product to the specified destination.

6. The method of claim 1 wherein the step (d) further comprises:

(d.1) calculating a first total cost of transporting the identified product to the specified destination by a first mode of transportation.

7. The method of claim 6 wherein the step of further comprises:

(d.2) calculating a second total cost of transporting the identified product to the specified destination by a second mode of transportation.

8. The method of claim 7 further comprising:

(e) providing to the requestor the first and second total costs.

9. The method of claim 1 wherein the information identifying the product comprises any of weight, size, product type, value, price or quantity data associated with the identified product.

10. The method of claim 1 wherein the cost data associated with transportation of the identified product comprises any of origin inland freight, destination inland freight, air freight, ocean freight, insurance, duties, taxes, custom clearance fee, or import fee cost data associated with a specific destination.

11. A method for providing a quote of the total costs of transporting a selected good to a specified destination comprising:

(a) receiving from a requestor information identifying a good and a destination to which the good is to be transported;

(b) retrieving values from a computer memory (280) representing costs associated with transportation of the identified good to the specified destination;

(c) computing the total costs of transporting the identified good to the specified destination; and

(d) providing to the requestor the total costs of transporting the identified good to the specified destination.

12. An apparatus for enabling shipment of products to a destination comprising:

(a) a processor (105; 265);

(b) a memory (110; 280), coupled to the processor, the memory containing data describing a selected product and costs associated with transportation of the selected product to at least one destination;

(c) a network interface (266), coupled to the processor and the memory, the network interface capable of receiving, from a requestor, data identifying a selected product and specifying a destination to which the identified product is to be transported; and

(d) program logic (266; 265; 268; 270) responsive to the data identifying the selected product and the specified destination and configured to determine the total cost of transporting the identified product to the specified destination.

13. The apparatus of claim 12 further comprising:

(a) program logic (264; 266) configured to provide the total cost to the requestor.

14. The apparatus of claim 12 wherein the information identifying the product comprises any of weight , size, product type, value, price or quantity data associated with the identified product.

15. The apparatus of claim 12 wherein the costs associated with a selected product comprises any of air freight, ocean freight, insurance, duties, taxes, custom clearance fee, or import fee cost data associated with a specific destination.

16. A computer program product for use with computer system operatively connectable to one or more requestors over a computer network, the computer program product comprising a computer usable medium (142; 147; or 152) having computer readable program code embodied thereon, the program code comprising:

(a) program code (270) for maintaining in the computer system memory (280) a description of a selected product and the costs associated with transportation of the selected product to at least one destination;

(b) program code (266; 265) for receiving from a requestor information identifying a selected product and specifying a destination to which the identified product is to be transported;

(c) program code (280; 265; 268) for retrieving from the computer memory, the costs associated with transportation of the identified product to the specified destination; and

(d) program code (265) for calculating the total cost associated with transportation of the identified product to the specified destination.

17. The computer program product of claim 16 further comprising:

(e) program code for providing the total cost to the requestor.

18. The computer program product of claim 16 wherein the program code for calculating the total cost of transporting further comprising:

(d.1) program code (265) for calculating a first total cost of transporting the identified product to the specified destination by a first mode of transportation.

19. The computer program product of claim 18 wherein the program code for calculating the total cost of transporting further comprising:

(d.2) program code (265) for calculating a second total cost of transporting the identified product to the specified destination by a second mode of transportation.

20. The computer program product of claim 19 further comprising:

(e) program code (264; 266) for providing to the requestor the first and second total costs.

21. The computer program product of claim 16 wherein the information identifying the product comprises any of weight, size, product type, value, price or quantity data associated with the identified product.

22. The computer program product of claim 16 wherein the costs associated with a selected product comprises any of air freight, ocean freight, insurance, duties, taxes, custom clearance fee, or import fee cost data associated with a specific destination.

23. A method for generating quotations of delivered costs for shipment of selected products between locations comprising:

(a) maintaining in a computer system memory (280) a description of a selected product and the costs associated with transportation of the selected product to at least one destination;

(b) maintaining in a computer system memory a plurality intermediate origin and destination pairs (410);

(c) receiving from a requestor, over a communication network, information identifying a selected product;

(d) receiving from a requestor, over a communication network, information identifying an initial origin and specifying a final destination between which the identified product is to be transported;

(e) retrieving from the computer system memory, the cost data associated with transportation of the identified product to the specified final destination; and

(f) calculating the total cost associated with transportation of the identified product to the specified final destination.

24. The method of claim 23 further comprising:

(g) providing the total cost to the requestor.

25. The method of claim 23 wherein step (f) further comprises:

(f.1) selecting one of the plurality of intermediate origin and destination pairs in accordance with a predetermined criteria.

26. The method of claim 25 wherein step (f) further comprises:

(f.2) calculating the cost associated with transportation of the identified product from the specified initial origin to the selected intermediate origin.

27. The method of claim 25 wherein step (f) further comprises:

(f.2) calculating the cost associated with transportation of the identified product from the selected intermediate origin to the selected intermediate destination.

28. The method of claim 25 wherein step (f) further comprises:

(f.2) calculating the cost associated with transportation of the identified product from the selected intermediate destination to the specified final destination.

29. The method of claim 23 wherein the information identifying the product comprises any of weight, size, product type, value, price or quantity data associated with the identified product.

30. The method of claim 23 wherein the cost data associated with transportation of the identified product comprises any of origin inland freight, destination inland freight, air freight, ocean freight, insurance, duties, taxes, custom clearance fee, or import fee cost data associated with a specific destination.

31. An apparatus for enabling shipment of products to a destination comprising:

(a) a processor (105;265);

(b) a memory (280), coupled to the processor, the memory containing data describing a selected product and costs associated with transportation of the selected product to at least one destination, the memory further containing data defining a plurality intermediate origin and destination pairs;

(c) a network interface (266), coupled to the processor and the memory, the network interface capable of receiving, from a requestor, data identifying a selected product, an initial origin and a final destination to which the identified product is to be transported; and

(d) program logic (265) responsive to the data identifying the selected product and the specified final destination and configured to determine the total cost of transporting the identified product to the specified final destination.

32. The apparatus of claim 31 further comprising:

(e) program logic (264; 266) configured to provide the total cost to the requestor.

33. The apparatus of claim 31 wherein the information identifying the product comprises any of weight, size, product type, value, price or quantity data associated with the identified product.

34. The apparatus of claim 31 wherein the cost data associated with a selected product comprises any of air freight, ocean freight, insurance, duties, taxes, custom clearance fee, or import fee cost data associated with a specific destination.

35. A computer program product for use with computer system operatively connectable to one or more requestors over a computer network, the computer program product comprising a computer usable medium (142,147,152) having computer readable program code embodied thereon, the program code comprising:

(a) program code (270) for maintaining in a computer system memory (280) a description of a selected product and the costs associated with transportation of the selected product to at least one destination and for maintaining a plurality of intermediate origin and destination pairs;

(b) program code (266) for receiving from a requestor information identifying a selected product, an initial origin and a final destination to which the identified product is to be transported;

(c) program code (265; 268) for retrieving from the computer memory, the costs associated with transportation of the identified product to the specified destination; and

(d) program code (265) for calculating the total cost associated with transportation of the identified product to the specified final destination.

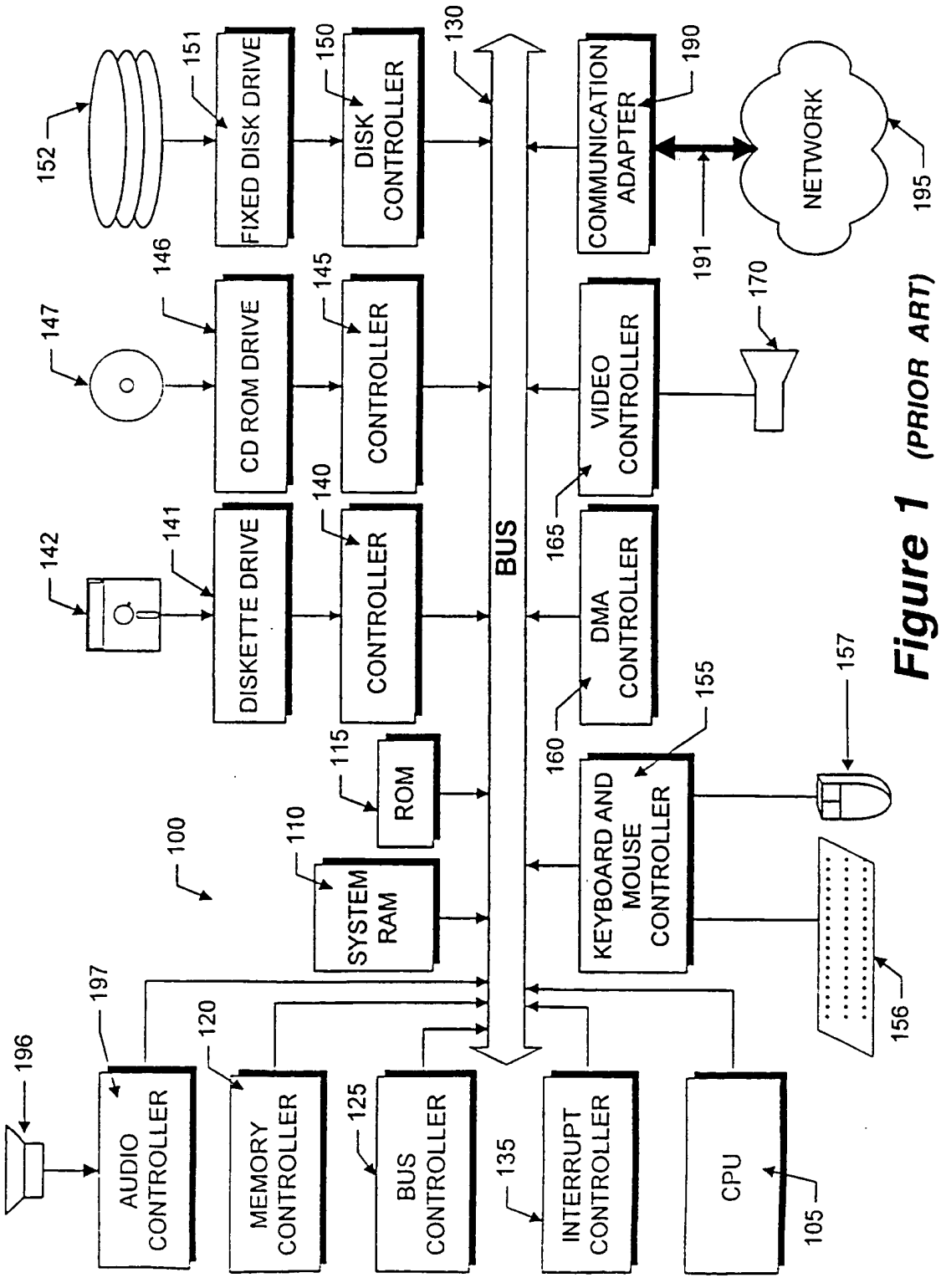


Figure 1 (PRIOR ART)

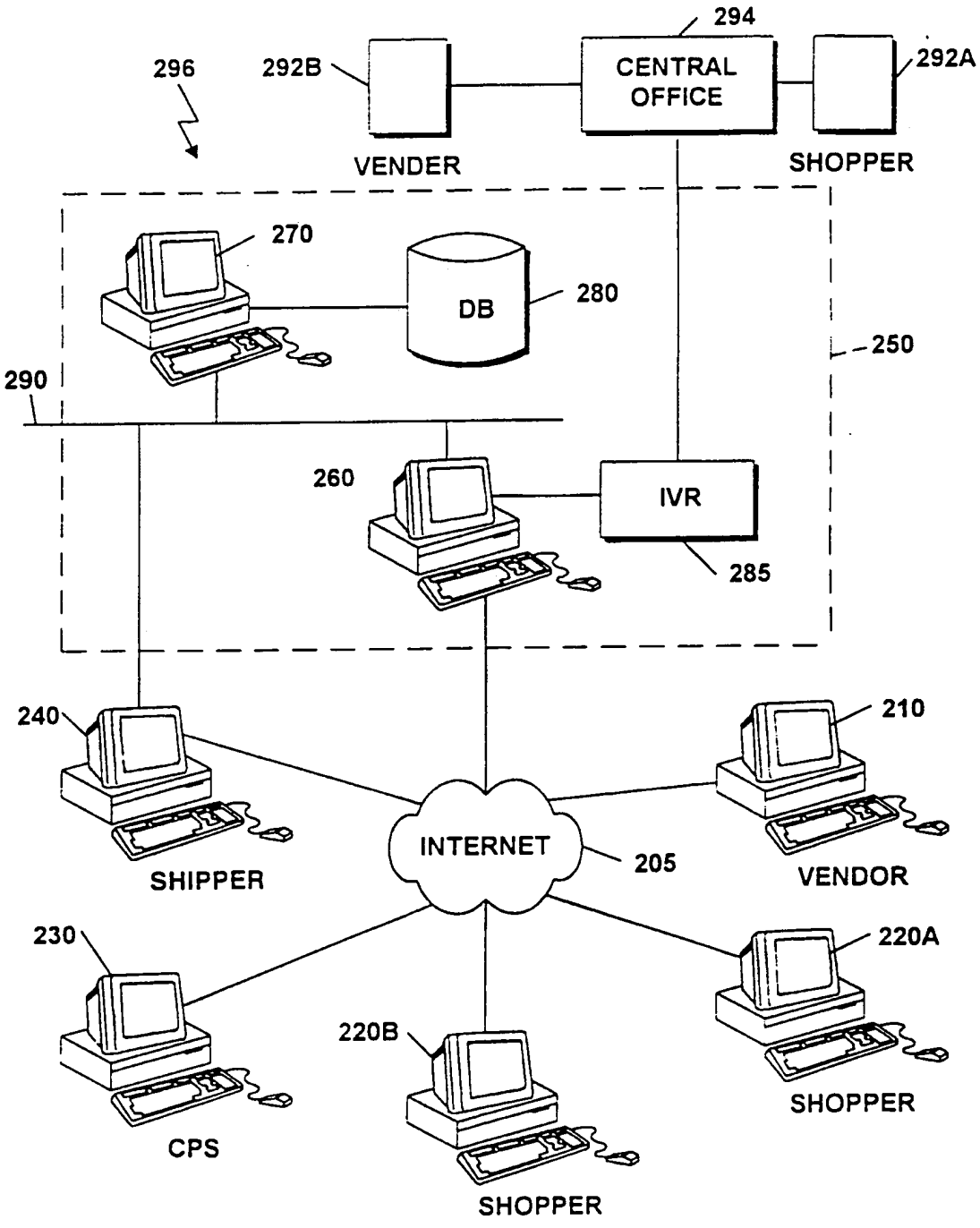

294
296
292B
CENTRAL OFFICE
292A
VENDER
SHOPPER
270
DB
280
250
290
260
IVR
285
240
210
INTERNET
205
SHIPPER
VENDOR
230
220A
220B
CPS
SHOPPER
SHOPPER

Figure 2

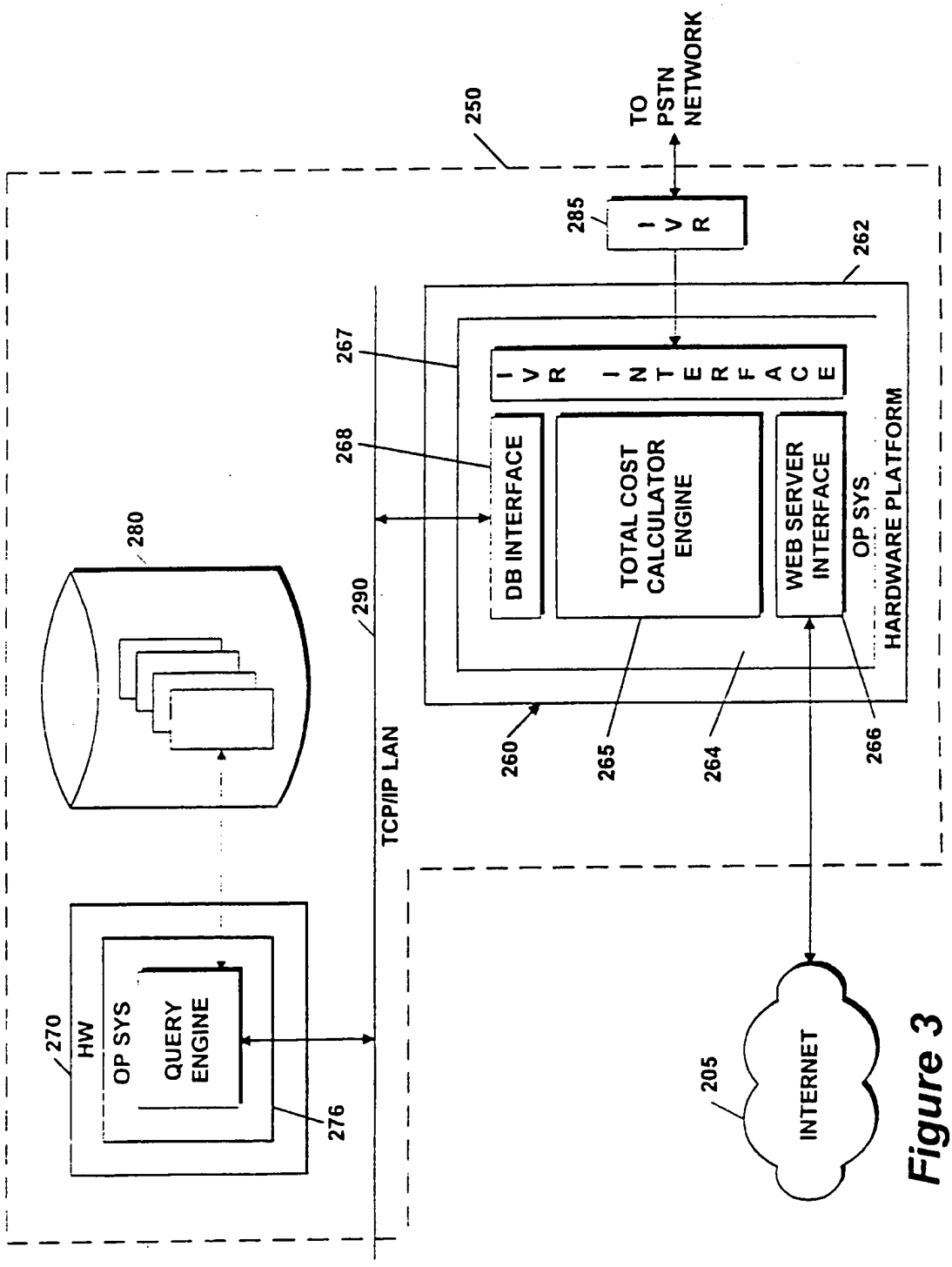

250
TO PSTN NETWORK
285
I V R
262
267
I V R I N T E R F A C E
268
DB INTERFACE
TOTAL COST CALCULATOR ENGINE
WEB SERVER INTERFACE
OP SYS
HARDWARE PLATFORM
280
290
TCP/IP LAN
260
265
264
266
270
HW
OP SYS
QUERY ENGINE
276
205
INTERNET

Figure 3

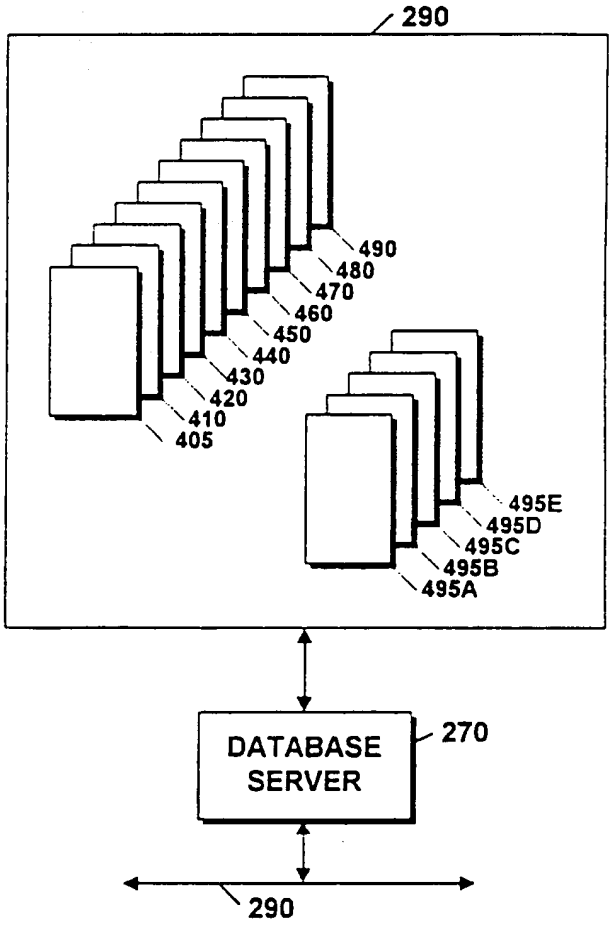

290
490
480
470
460
450
440
430
420
410
405
495E
495D
495C
495B
495A
DATABASE SERVER
270
290

Figure 4A

410

410A ORIGIN_PORT	410B DEST_PORT	410C OCEAN_ZONE_CHARGE	410D AIR_ZONE_CHARGE
1	598	11	3
1	52	5	5
1	54	11	3
1	55	11	5
1	56	15	3
1	57	9	1
1	51	10	3
1	593	10	7
1	591	30	9
1	787	7	7
1	809	7	6
1	852		6
1	30	22	1
1	972		1
1	507		6
1	58	8	6
1	33	10	10
1	31	10	10
1	595	23	3
1	32	10	10
1	506	11	4
1	34	22	10
1	351	12	1
1	352	23	10
1	353	23	10
1	358	24	10
1	39	18	10
1	43	25	10
1	44	10	10
1	45	15	10
1	46	18	10
1	49	23	10
15	598		0
15	51		0
15	52		0
15	54		0
15	55		0
15	56		0
15	57		0
15	58		0
15	591		0
15	809		0
15	595		0
15	506		0
15	787		0
15	852		0
15	39		

Figure 4B

420A ZONE	420B RATE	420C SERV_FEE
1	$65.00	$35.00
2	$70.00	$35.00
3	$75.00	$35.00
4	$80.00	$35.00
5	$85.00	$35.00
6	$90.00	$35.00
7	$95.00	$35.00
8	$100.00	$35.00
9	$105.00	$35.00
10	$110.00	$35.00
11	$115.00	$35.00
12	$120.00	$35.00
13	$125.00	$35.00
14	$130.00	$35.00
15	$135.00	$35.00
16	$140.00	$35.00
17	$145.00	$35.00
18	$150.00	$35.00
19	$155.00	$35.00
20	$160.00	$35.00
21	$165.00	$35.00
22	$170.00	$35.00
23	$175.00	$35.00
24	$180.00	$35.00
25	$185.00	$35.00
26	$190.00	$35.00
27	$195.00	$35.00
28	$200.00	$35.00
29	$205.00	$35.00
30	$210.00	$35.00
31	$215.00	$35.00
32	$220.00	$35.00
33	$225.00	$35.00
34	$230.00	$35.00
35	$235.00	$35.00
36	$240.00	$35.00
37	$245.00	$35.00
38	$250.00	$35.00
39	$255.00	$35.00
40	$260.00	$35.00
41	$265.00	$35.00
42	$270.00	$35.00
43	$275.00	$35.00
44	$280.00	$35.00
45	$285.00	$35.00
46	$290.00	$35.00
47	$295.00	$35.00

420

Figure 4C

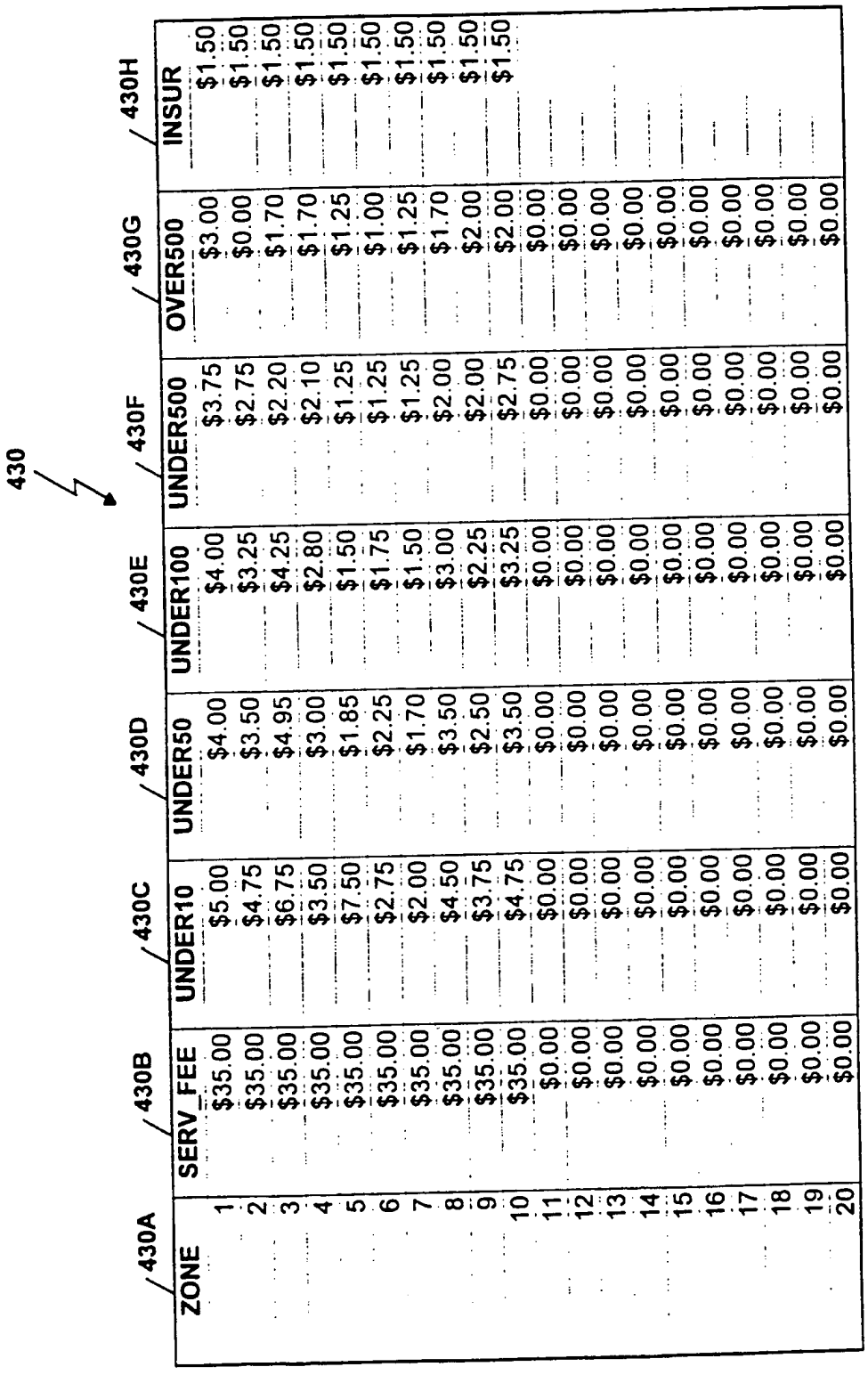

430
430A
430B
430C
430D
430E
430F
430G
430H
ZONE
SERV_FEE
UNDER10
UNDER50
UNDER100
UNDER500
OVER500
INSUR
1 $35.00 $5.00 $4.00 $3.75 $3.00 $1.50
2 $35.00 $4.75 $3.50 $2.75 $0.00 $1.50
3 $35.00 $6.75 $4.95 $2.20 $1.70 $1.50
4 $35.00 $3.50 $3.00 $2.10 $1.70 $1.50
5 $35.00 $7.50 $1.85 $1.25 $1.25 $1.50
6 $35.00 $2.75 $2.25 $1.25 $1.00 $1.50
7 $35.00 $2.00 $1.70 $1.25 $1.25 $1.50
8 $35.00 $4.50 $3.50 $3.00 $1.70 $1.50
9 $35.00 $3.75 $2.50 $2.25 $2.00 $1.50
10 $35.00 $4.75 $3.50 $3.25 $2.00 $1.50
11 $0.00 $0.00 $0.00 $0.00 $0.00
12 $0.00 $0.00 $0.00 $0.00 $0.00
13 $0.00 $0.00 $0.00 $0.00 $0.00
14 $0.00 $0.00 $0.00 $0.00 $0.00
15 $0.00 $0.00 $0.00 $0.00 $0.00
16 $0.00 $0.00 $0.00 $0.00 $0.00
17 $0.00 $0.00 $0.00 $0.00 $0.00
18 $0.00 $0.00 $0.00 $0.00 $0.00
19 $0.00 $0.00 $0.00 $0.00 $0.00
20 $0.00 $0.00 $0.00 $0.00 $0.00

Figure 4D

450

PRODUCT PORTUGUESE	PRODUCT SPANISH	PRODUCT ENGLISH (450A)	TARIFF (450B)
	BINOCULARES. TLELSCOPIOS	BINOCULARS. MONOCULARS. TELESCOP	9011
	ROPA DE HOMBRE/NINOS	MENS/BOYS GARMENTS	6107
	ROPA DE SENORA/NINAS	WOMENS/GIRLS GARMENTS	6104
	PANTALONES	PANTS/TROUSERS	6103
	CANARAS PARA DEABAJO D	CAMERAS. UNDERWATER	9006
	OBRAS DE ARTS	ARTWORK	9701
	INSTRUMENTOS MUSICALES D	MUSICAL WIND INSTRUMENTS	9205
	CHAQUETAS	JACKETS/BLAZERS	6103
	MICROSCOPIOS	MICROSCOPES	9011
	ELECTRODOMESTICOS ORTORP	ORTHOPEDIC APPLIANCES	9021
	OSCILLOSCOPIOS DIGITALES	DIGITAL OSCILLOSCOPES	9030
	FOROCOPIADORAS	PHOTOCOPIERS	9009
	ENDOSCOPICOS MEDICOS	MEDICAL ENDOSCOPES	9018
	JERINGAS	SYRINGES	9018
	JUGUETES	TOYS	9502
	ARTIC DEPORTIVOS	SPORTING GOODS	9502
	JEUEGOS DE HERRAMIENTAS	TOOL KITS	8206
	CUCHILLOS	KNIVES. SINGLE OR IN SETS	8211
	NAVAJAS CUCHILLAS	RAZORS AND BLADES	8212
	ARTICULOS DE COCINA	KITCHEN OR TABLEWARE	8215
	LIBROS	BOOKS	4901
	SCANNERS DE COMPUTADOR	SCANNERS	8471
	HOJAS DE SIERRA	SAW BLADES	8282
	MOTORES AEREOS	AIRCRAFT ENGINES	8407
	MOTORES MARINOS	MARINE MOTORS	8407
	REPURESTOS MOTORES	AUTOMOBILE ENGINE PARTS	8409
	AIRE ACONDICIONADO	AIR CONDITIONER	8415
	REFRIGERADORES/CONGELAD	REFRIGERATORS/FREEZERS	8418
	CENTRIFUGAS	CENTRIFUGES	8421
	EQUIPO AL REVERSO DE OS	REVERSE OSMOSIS EQUIPMENT	8421
	REGADIOS	SPRAYERS/DISPERSERS	8424
	REPUESTOS DE MONTECARG	FORK LIFT PARTS	8431
	PODADORA CESPEO	LAWN MOWERS	8433
	IMPRESORAS DE TINTA JET	PRINTERS. INK JET	8443
	SIERRA CIRCULARES	CIRCULAR SAWS	8465
	SIERRAS DE CADENA	CHAIN SAWS	8467
	IMPRESORAS DE TINTA JET	PRINTERS. DOT MATRIX	8471
	IMPRESORAS DE RAYOS LAS	PRINTERS. LASER	8471
	UNIDADES DE MEMORIA	STORAGE UNITS. MAGNETIC TAPE	8471
	TARJETAS DE MEMORIA	MEMORY CARD	8473
	LENTAS DE CAMARA	CAMERA LENSES	9001
	REPUESTOS . MOTORES AERE	AIRCRAFT ENGINE PARTS	8409
	MEDICAL	MEDICAL ENDOSCOPES	9006
	TARADOS DENTALES	DENTAL DRILLS	9018
	CAMISETAS	T-SHIRTS	6109
	GUANTES	GLOVES	6116
	MALETAS	SUITCASES	4202

Figure 4E

460

460A TARIFF	460B COUNTRY	460C DUTY_DESC	460D PERC	460E AMOUNT	460F DUTY_ORDER
				0	0
3303	001	DUTY @ 0%	0	0	10
3303	001	SUBTOTAL	0	0	20
3702	001	DUTY @ 6.5%	6.5	0	10
3702	001	SUBTOTAL	0	0	20
4009	001	DUTY @ 2.5%	2.5	0	10
4009	001	SUBTOTAL	0	0	20
4202	001	DUTY @ 20%	20	0	10
4202	001	SUBTOTAL	0	0	20
4901	001	DUTY @ 0%	0	0	10
4901	001	SUBTOTAL	0	0	20
4903	001	DUTY @ 0%	0	0	10
4903	001	SUBTOTAL	0	0	20
4904	001	DUTY @ 0%	0	0	10
4904	001	SUBTOTAL	0	0	20
4911	001	DUTY @ 0%	0	0	10
4911	001	SUBTOTAL	0	0	20
6103	001	DUTY @ 5.8%	5.8	0	10
6103	001	SUBTOTAL	0	0	20
6104	001	DUTY @ 5.8%	5.8	0	10
6104	001	SUBTOTAL	0	0	20
6107	001	DUTY @ 7.6%	7.6	0	10
6107	001	SUBTOTAL	0	0	20
6109	001	DUTY @ 16.5	16.5	0	10
6109	001	SUBTOTAL	0	0	20
6111	001	DUTY @ 16%	16	0	10
6111	001	SUBTOTAL	0	0	20
6116	001	DUTY @ 3.9%	3.9	0	10
6116	001	SUBTOTAL	0	0	20
6403	001	DUTY @ 8%	8	0	10
6403	001	SUBTOTAL	0	0	20
6405	001	DUTY @ 10%	10	0	10
6405	001	SUBTOTAL	0	0	20
8201	001	DUTY @ 0%	0	0	10
8201	001	SUBTOTAL	0	0	20
8203	001	DUTY @ 5.5%	5.5	0	10
8203	001	SUBTOTAL	0	0	20
8204	001	DUTY @ 9%	9	0	10
8204	001	SUBTOTAL	0	0	20
8206	001	DUTY @ 3.7%	3.7	0	10
8206	001	SUBTOTAL	0	0	20
8211	001	DUTY @ 4.6%	4.6	0	10

Figure 4F

470

470A CODE	470B DESC	470C PERC	470D AMOUNT	470E ORDER
595	VAT TAX @ 10% DUTY PAID VALUE	10	0	40
598	BROU + TSA TAXES AT 1.3% CIF	1.3	0	10
598	VAT TAX @23% DUTY PAID VALUE	23	0	20
598	PORT FEES FOR SHIPMENTS OVER $3.5	0	120	30
30	VAT TAX @ 18% DUTY PAID VALUE	18	0	10
31	VAT TAX @ 17.5% DUTY PAID VALUE	17.5	0	10
32	VAT TAX @ 21% DUTY PAID VALUE	21	0	10
33	VAT TAX @ 20.6% DUTY PAID VALUE	20.6	0	10
34	VAT TAX @ 16% DUTY PAID VALUE	16	0	10
351	VAT TAX @ 17% DUTY PAID VALUE	17	0	10
352	VAT TAX @ 15% DUTY PAID VALUE	15	0	10
353	VAT TAX @ 21% DUTY PAID VALUE	21	0	10
358	VAT TAX @ 22% DUTY PAID VALUE	22	0	10
39	VAT TAX @ 20% DUTY PAID VALUE	20	0	10
43	VAT TAX @ 20% DUTY PAID VALUE	20	0	10
45	VAT TAX @ 25% DUTY PAID VALUE	25	0	10
46	VAT TAX @ 25% DUTY PAID VALUE	25	0	10
49	VAT TAX @ 16% DUTY PAID VALUE	16	0	10
44	VAT TAX @ 17.5% DUTY PAID VALUE	17.5	0	10
58	CUSTOMS SERVICE TAX 2% CIF	2	0	10
58	VAT TAX @ 16.8%	16.8	0	20
54	IMPORT STATISTICS FEE @ .5% CIF V	0.5	0	10
54	VAT TAX @21%	21	0	20
54	ADVANCE VALUE ADDED TAX @ 9%	9	0	30
54	ANTICIPATED PROFITS TAX @ 3%	3	0	40
55	PORT AND CUSTOMS FEE @ 7% CI	7	0	10
55	MERCHANDISE CIRCULATION TAX @ 1	18	0	20
591	INSPECTION FEE @ 1.92% FOB VAL	1.92	0	10
591	CUSTOMS BROKER CHARGES @ 2% CI	2	0	20
591	CUSTOMS FORMS @ $80/SHIPMENT	0	80	30
591	CUSTOMS WAREHOUSE SERVICE FEE	0.5	0	40
591	VAX TAX @ 14.94%	15.94	0	50
56	AIRPORT FEE @ 2% IMPORTED VALUE	2	0	10
56	VAT TAX @ 18%	18	0	20
506	SURCHARGE TAX @ 1% DUTY PAID V	1	0	10
57	VAT TAX @ 16% DUTY PAID VALUE	16	0	10
52	VAT TAX @ 15% DUTY PAID VALUE	15	0	10
52	CUSTOMS PROCESSING FEE OF .8% F	0.8	0	20
51	VAT TAX @ 18% DUTY PAID VALUE	18	0	10
809	VAT TAX @ 30% DUTY PAID VALUE	30	0	10
809	CURRENCY EXCHANGE OF 1.75% CIF	1.75	0	20
809	SALES TAX OF 8% CIF	8	0	30

Figure 4G

480A COUNTRY	480B ID	480C CITY	480D STATE	480E ZONE
1	1	MIAMI	FLORIDA	1
1	2	FT. LAUDERDALE	FL	1
1	3	ORLANDO	FL	1
1	4	TAMPA	FLORIDA	1
1	5	JACKSONVILLE	FLORIDA	1
1	6	ATLANTA	GEORGIA	1
1	7	CHARLESTON	SOUTH CAROLINA	2
1	8	CHARLOTTE	NORTH CAROLINA	2
1	9	NASHVILLE	TENNESSEE	2
1	10	MOBILE	ALABAMA	2
1	11	NEW ORLEANS	LOUISIANA	2
1	12	HOUSTON	TEXAS	2
1	13	DALLAS	TEXAS	2
1	14	KANSAS CITY	MOSSOURI	2
1	15	CHICAGO	ILLINOIS	2
1	16	NEW YORK	NEW YORK	2
1	17	PHILADELPHIA	PENNSYLVANIA	3
1	18	BOSTON	MASSACHUSETTS	3
1	19	SEATTLE	WASHINGTON	3
1	20	PORTLAND	OREGON	3
1	21	SAN FRANCISCO	CALIFORNIA	3
1	22	OAKLAND	CALIFORNIA	3
1	23	LOS ANGELES	CALIFORNIA	3
1	24	SAN DIEGO	CALIFORNIA	3
1	25	PHOENIX	ARIZONA	3
1	26	DENVER	COLORADO	3
1	27	LAS VEGAS	NEVADA	3
1	28	LINCOLN	NEBRASKA	3
1	29	AUSTIN	TEXAS	2
30	30	ATHENS		0
30	31	PIRAEUS		3
31	32	AMSTERDAM		0
31	33	ROTTERDAM		0
32	34	BRUSSELS		1
32	35	ANTWERP		0
33	36	PARIS		0
33	37	ORLY		0
33	38	LE HAVRE		0
34	39	MADRID		0
34	40	BARCELONA		1
34	41	VALENCIA		1
39	42	MILAN		0
39	43	NAPLES		2
39	44	ROME		2
39	45	VENICE		1
43	46	VIENNA		1
43	47	GRAZ		1

480

Figure 4H

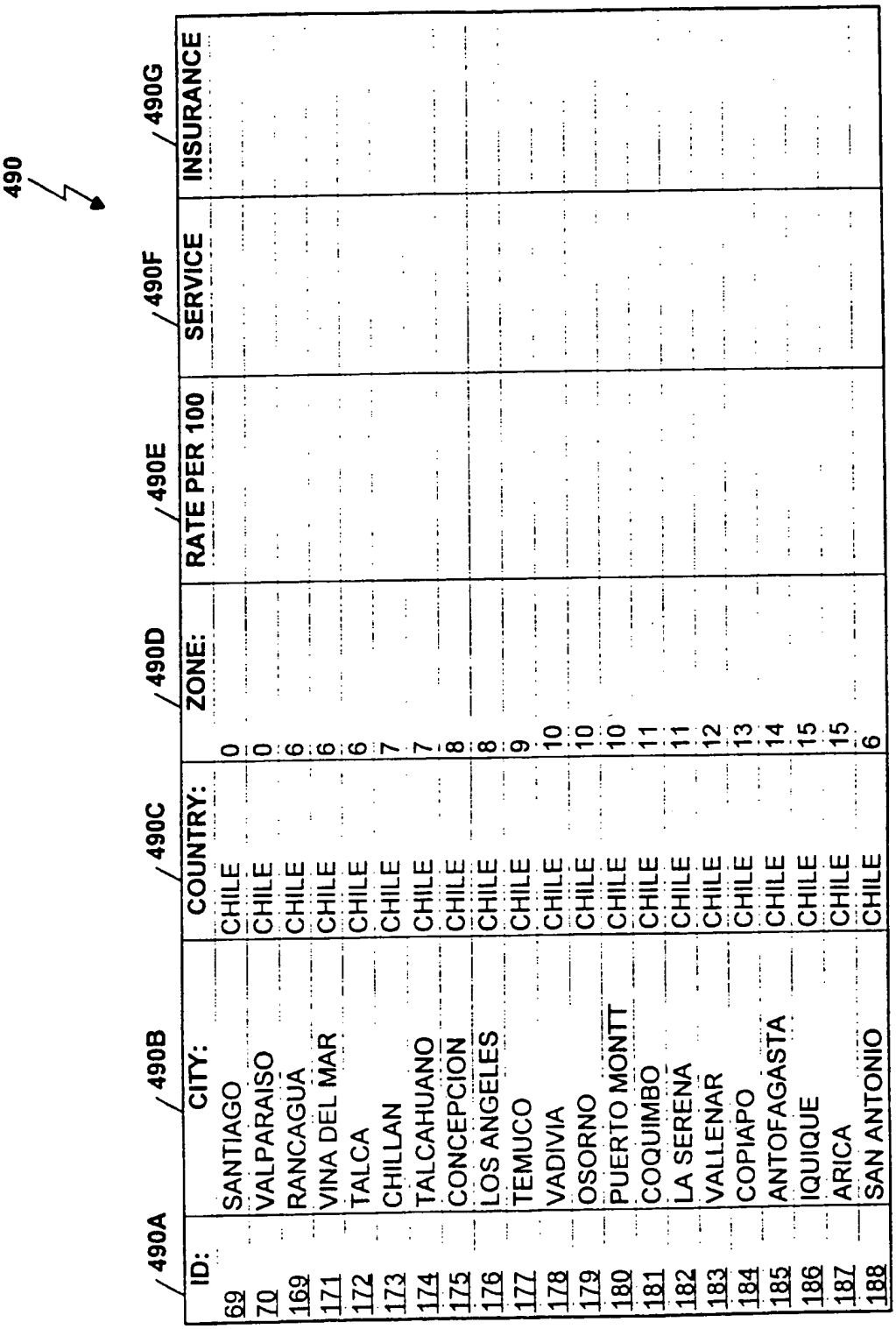

490
490A
490B
490C
490D
490E
490F
490G
ID:
CITY:
COUNTRY:
ZONE:
RATE PER 100
SERVICE
INSURANCE
69 SANTIAGO CHILE 0
70 VALPARAISO CHILE 0
169 RANCAGUA CHILE 6
171 VINA DEL MAR CHILE 6
172 TALCA CHILE 6
173 CHILLAN CHILE 7
174 TALCAHUANO CHILE 7
175 CONCEPCION CHILE 8
176 LOS ANGELES CHILE 8
177 TEMUCO CHILE 9
178 VADIVIA CHILE 10
179 OSORNO CHILE 10
180 PUERTO MONTT CHILE 10
181 COQUIMBO CHILE 11
182 LA SERENA CHILE 11
183 VALLENAR CHILE 12
184 COPIAPO CHILE 13
185 ANTOFAGASTA CHILE 14
186 IQUIQUE CHILE 15
187 ARICA CHILE 15
188 SAN ANTONIO CHILE 6

Figure 4I

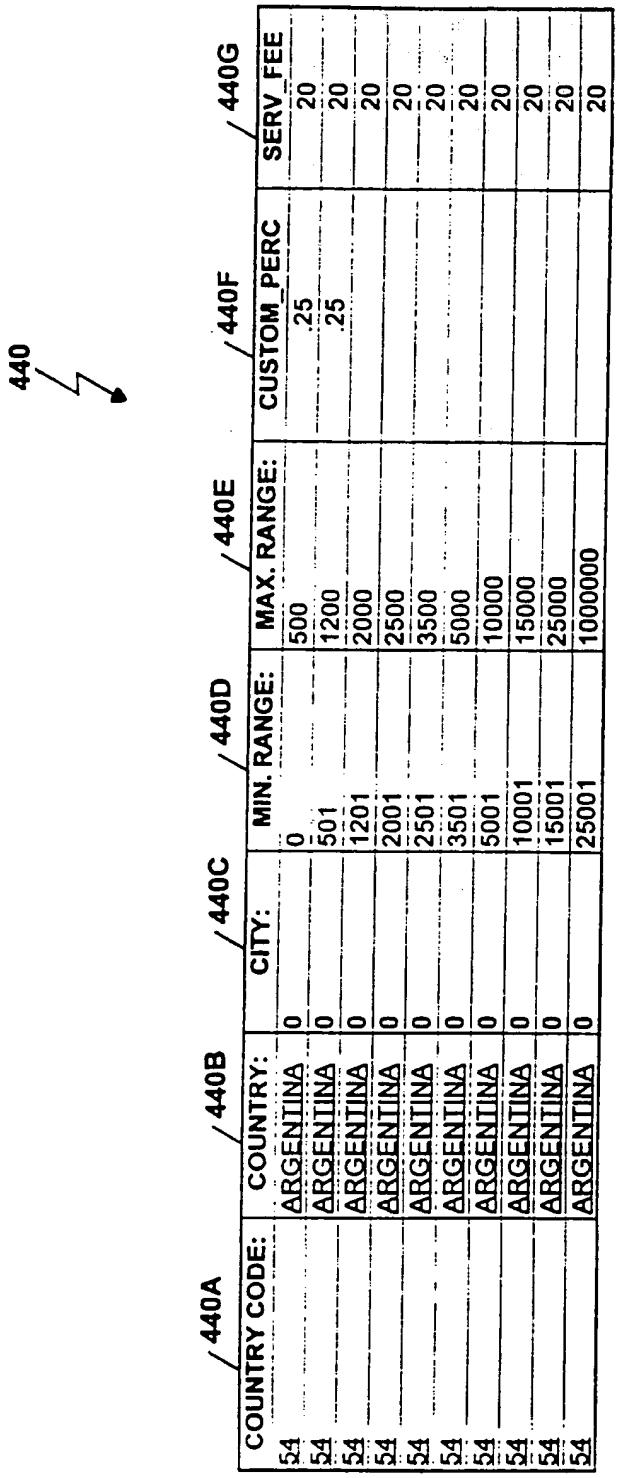

440
440A
440B
440C
440D
440E
440F
440G
COUNTRY CODE:
COUNTRY:
CITY:
MIN. RANGE:
MAX. RANGE:
CUSTOM_PERC
SERV_FEE
54 ARGENTINA 0 0 500 .25 20
54 ARGENTINA 0 501 1200 .25 20
54 ARGENTINA 0 1201 2000 20
54 ARGENTINA 0 2001 2500 20
54 ARGENTINA 0 2501 3500 20
54 ARGENTINA 0 3501 5000 20
54 ARGENTINA 0 5001 10000 20
54 ARGENTINA 0 10001 15000 20
54 ARGENTINA 0 15001 25000 20
54 ARGENTINA 0 25001 1000000 20

Figure 4J

405

405A COUNTRY_CODE	405B COUNTRY_NAME
1	UNITED STATES
30	GREECE
31	NETHERLANDS
32	BELGIUM
33	FRANCE
34	SPAIN
39	ITALY
43	AUSTRIA
44	UNITED KINGDOM
45	DENMARK
46	SWEDEN
49	GERMANY
51	PERU
52	MEXICO
54	ARGENTINA
55	BRAZIL
56	CHILE
57	COLOMBIA
58	VENEZUELA
351	PORTUGAL
352	LUXEMBOURG
353	IRELAND
358	FINLAND
506	COSTA RICA
507	PANAMA
507	PANAMA
591	BOLIVIA
593	ECUADOR
595	PARAGUAY
598	URUGUAY
787	PUERTO RICO
809	DOMINICAN REP
852	HONG KONG
972	ISRAEL

Figure 4K

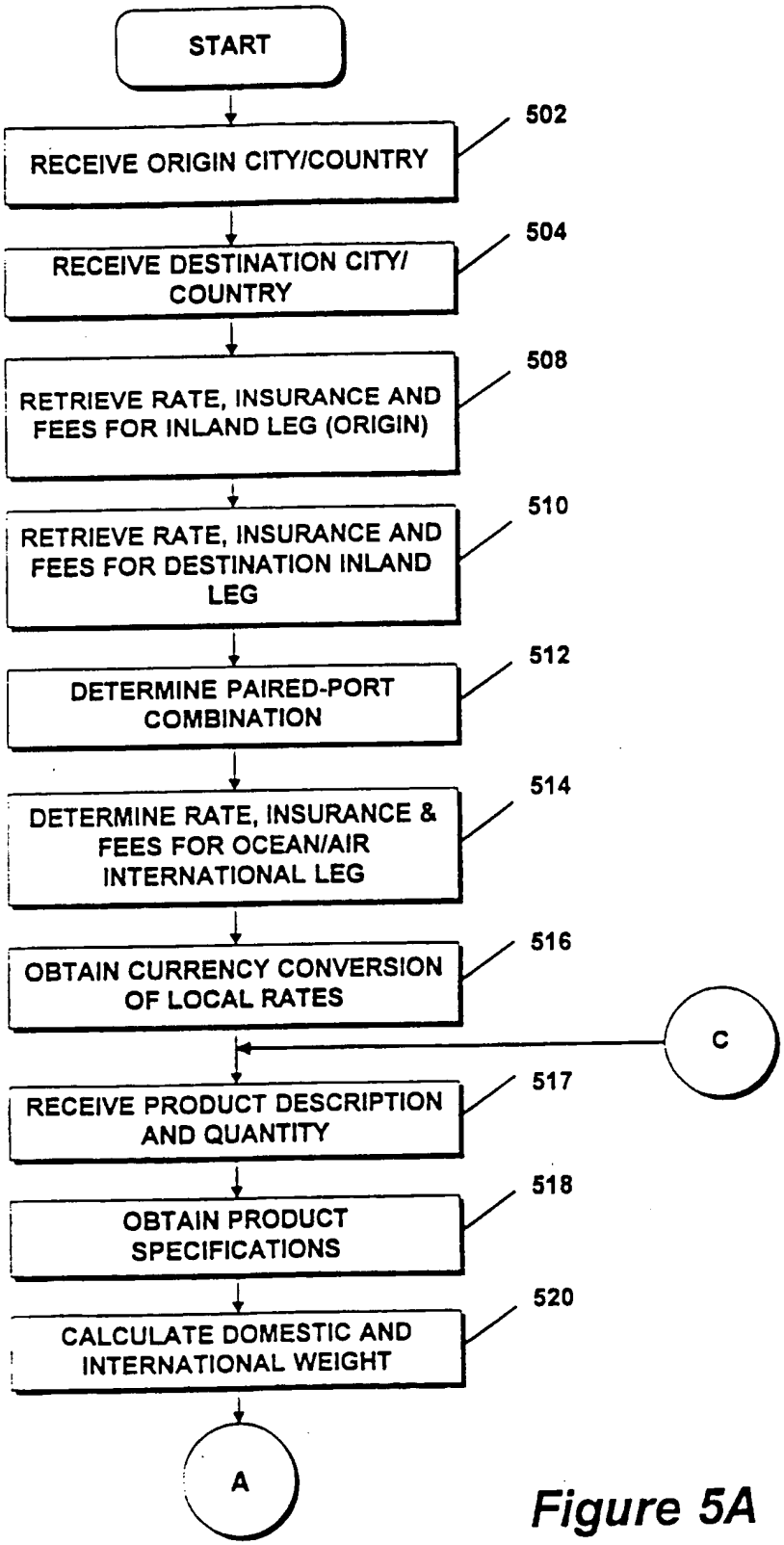

START
RECEIVE ORIGIN CITY/COUNTRY
502
RECEIVE DESTINATION CITY/ COUNTRY
504
RETRIEVE RATE, INSURANCE AND FEES FOR INLAND LEG (ORIGIN)
508
RETRIEVE RATE, INSURANCE AND FEES FOR DESTINATION INLAND LEG
510
DETERMINE PAIRED-PORT COMBINATION
512
DETERMINE RATE, INSURANCE & FEES FOR OCEAN/AIR INTERNATIONAL LEG
514
OBTAIN CURRENCY CONVERSION OF LOCAL RATES
516
C
RECEIVE PRODUCT DESCRIPTION AND QUANTITY
517
OBTAIN PRODUCT SPECIFICATIONS
518
CALCULATE DOMESTIC AND INTERNATIONAL WEIGHT
520
A

Figure 5A

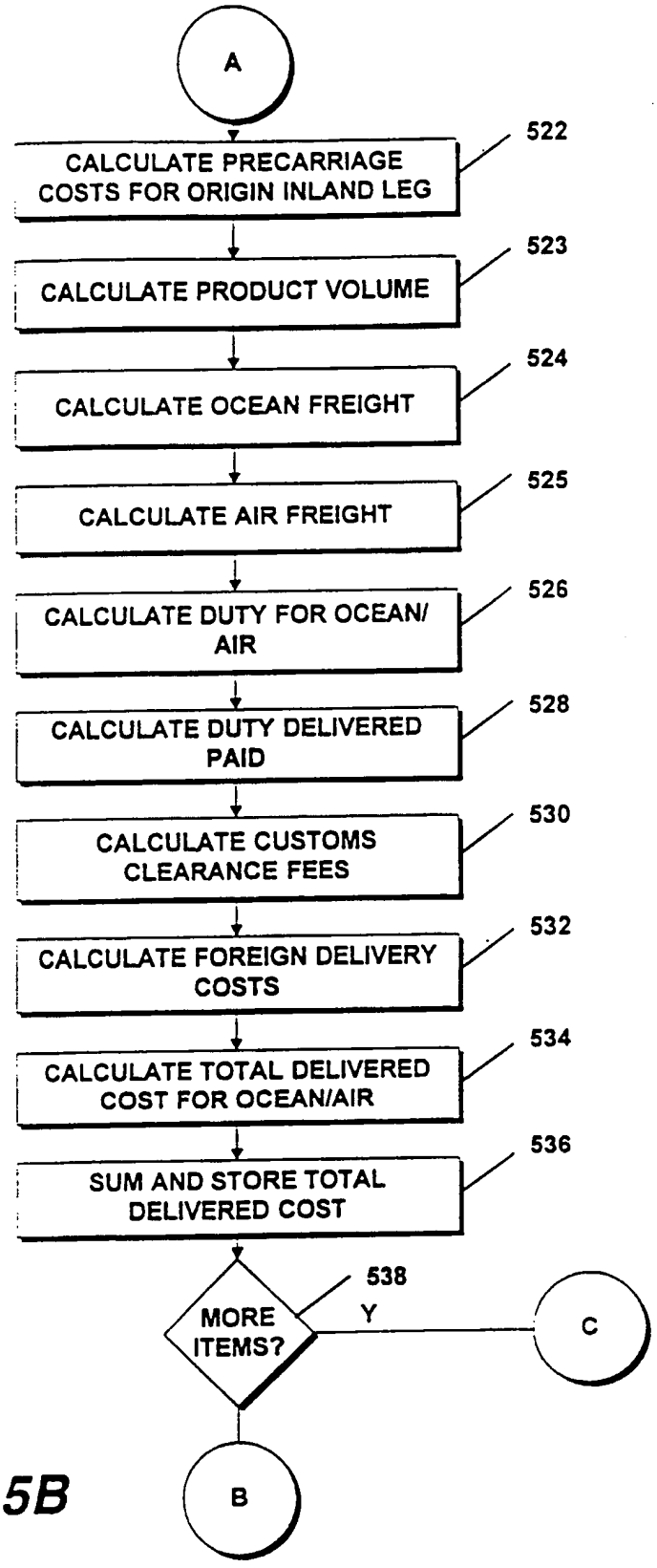

A
CALCULATE PRECARRIAGE COSTS FOR ORIGIN INLAND LEG
522
CALCULATE PRODUCT VOLUME
523
CALCULATE OCEAN FREIGHT
524
CALCULATE AIR FREIGHT
525
CALCULATE DUTY FOR OCEAN/ AIR
526
CALCULATE DUTY DELIVERED PAID
528
CALCULATE CUSTOMS CLEARANCE FEES
530
CALCULATE FOREIGN DELIVERY COSTS
532
CALCULATE TOTAL DELIVERED COST FOR OCEAN/AIR
534
SUM AND STORE TOTAL DELIVERED COST
536
MORE ITEMS?
538
Y
C
B

Figure 5B

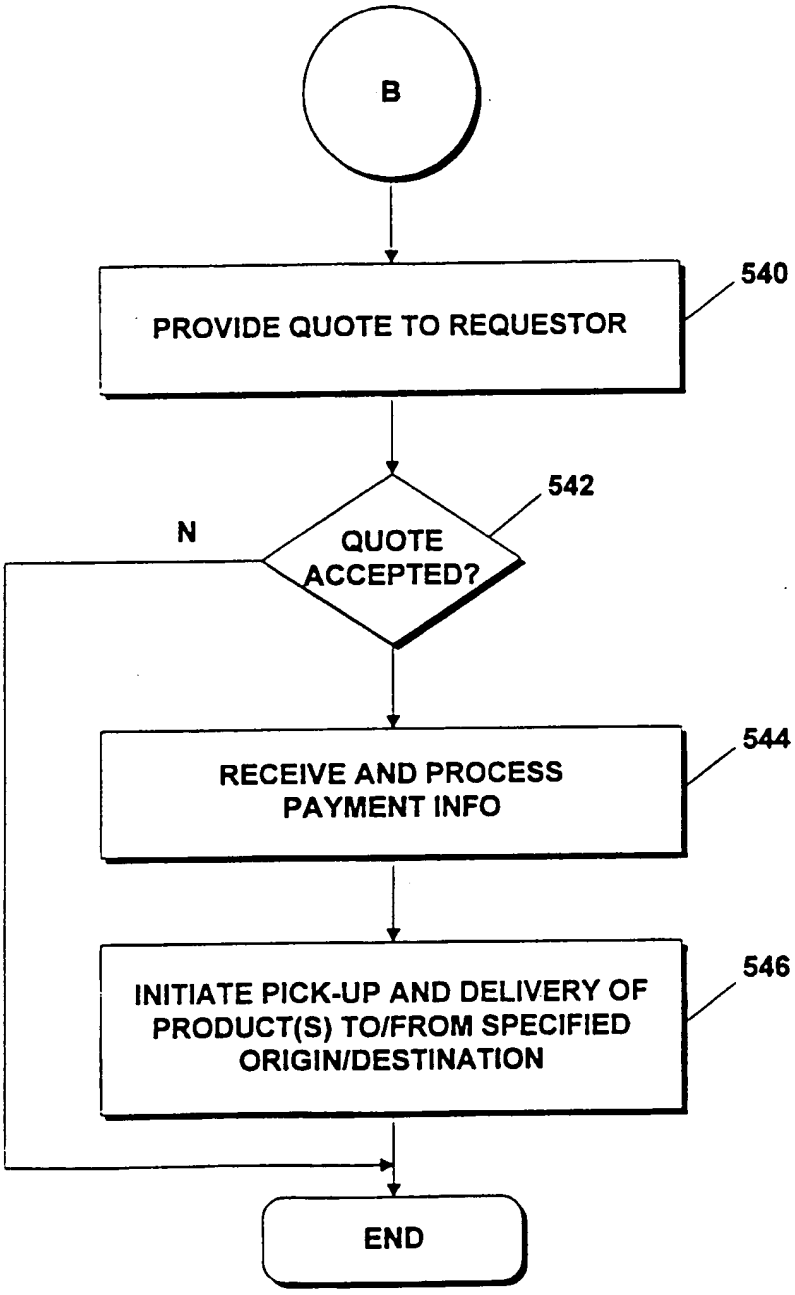

B
PROVIDE QUOTE TO REQUESTOR
540
QUOTE ACCEPTED?
542
N
RECEIVE AND PROCESS PAYMENT INFO
544
INITIATE PICK-UP AND DELIVERY OF PRODUCT(S) TO/FROM SPECIFIED ORIGIN/DESTINATION
546
END

Figure 5C

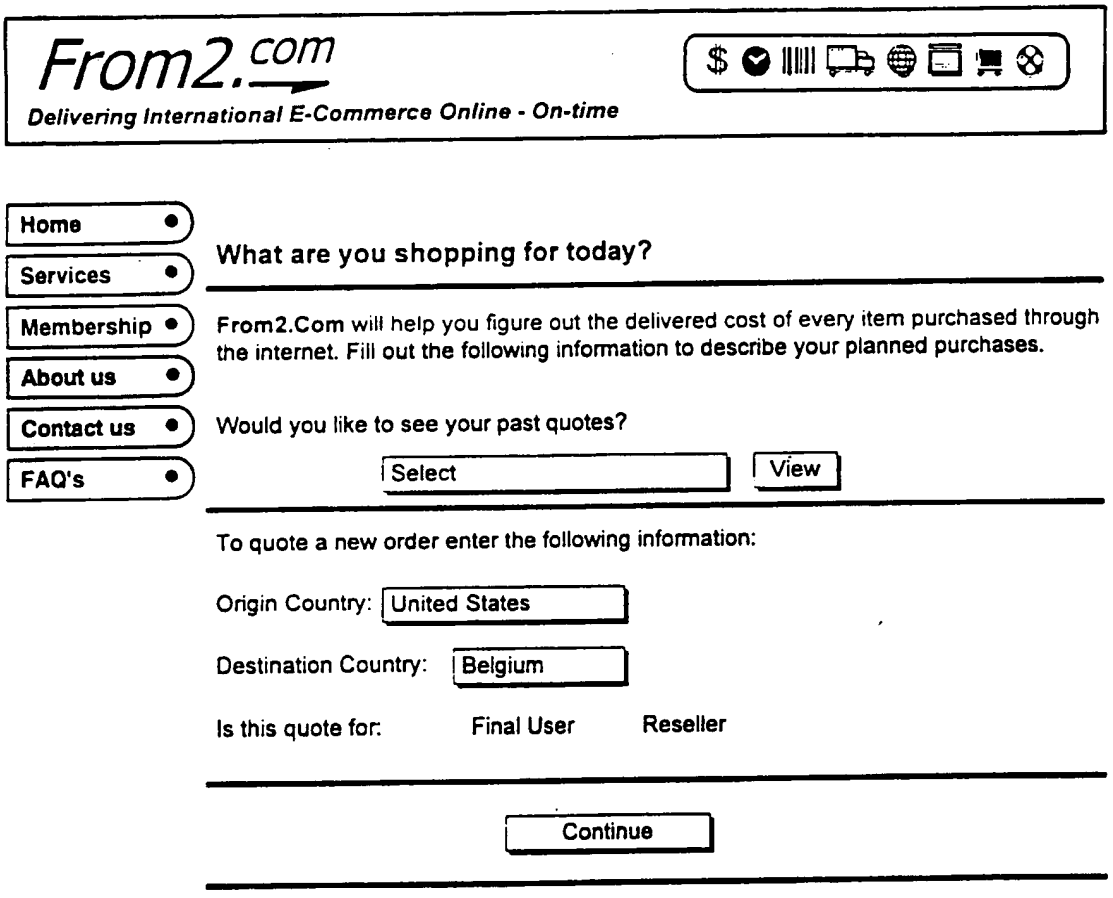

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Figure 6A

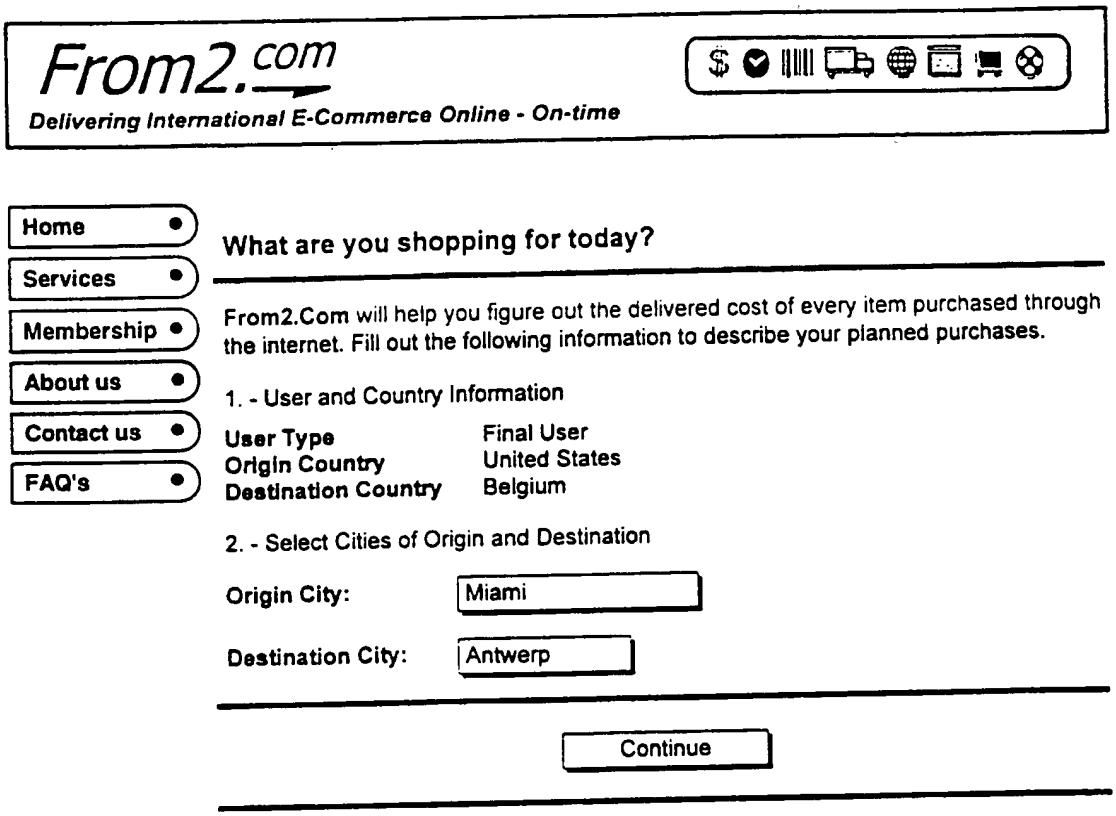

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Figure 6B

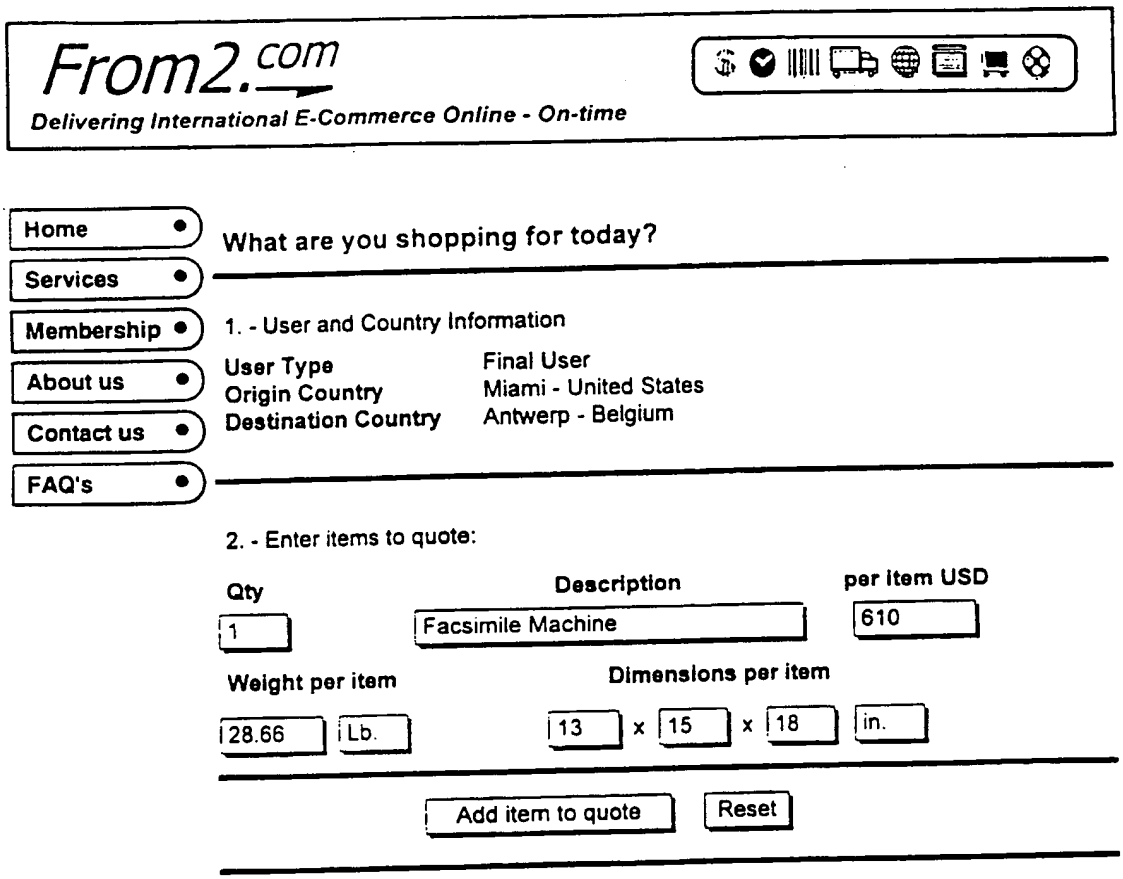

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Origin Country
Destination Country
Final User
Miami - United States
Antwerp - Belgium
2. - Enter items to quote:
Qty
Description
per item USD
1
Facsimile Machine
610
Weight per item
Dimensions per item
28.66
Lb.
13
x
15
x
18
in.
Add item to quote
Reset

Figure 6C

SAMPLE QUOTE 1

Shipping from Miami to Belgium
1 Facsimile Machine, 2 Computers, and 1 Computer Monitor

Quantity	Description	Weight (Lb)	Total Weight (Lb)	Size (In)	Value	Total Value	Duty Rate %
1	Facsimile Machine	28.66	28.66	13x15x18	$610.00	$610.00	1.90%
2	Computers	41.00	82.00	24x30x20	$1,220.00	$2,440.00	0.00%
1	Computer Accessories	29.00	29.00	18x18x18	$490.00	$490.00	0.00%
4			237.29			$3,540.00	

RECEIVED
from : Miami to : Belgium Cost : $3,540.00
Chargeable Weight 237.29 lb. by air 1.57 cu. m. by ocean

	By Air	By Ocean
Cost :	$3,540.00	$3,540.00
Inland Trucking and Terminal Handling :	$0.00	$0.00
Freight and Insurance :	$745.95	$170.87
CIF :	$4,285.95	$3,710.87
Duty :	$25.76	$11.62
SUBTOTAL::	$4,311.71	$3,722.49
VAT Tax @ 21% Duty Paid Value:	$905.46	$781.72
Import Service Fee:	$52.17	$52.69
TOTAL ::	$5,269.34	$4,556.90

Figure 7

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09/464,543	15 December 1999 (15.12.1999)	US
09/464,537	15 December 1999 (15.12.1999)	US

(71) Applicant *(for all designated States except US)*: FROM2.COM, INC. [—/US]; 8055 N.W. 77th Court, Suite 5, Miami, FL 33166 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: FALIC, Leon, S. [US/US]; Bal Harbour, FL 33154 (US). GOLDFARB, Gary, M. [US/US]; 145 Bal Bay Drive, Bal Harbour, FL 33154 (US). REDLHAMMER, Robert, E. [US/US]; 740 N.W. 86th Avenue, Pembroke Pines, FL 33024 (US).

(74) Agent: JOBSE, Bruce, D.; Kudirka & Jobse, LLP, Two Center Plaza, Boston, MA 02108 (US).

(81) Designated States *(national)*: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

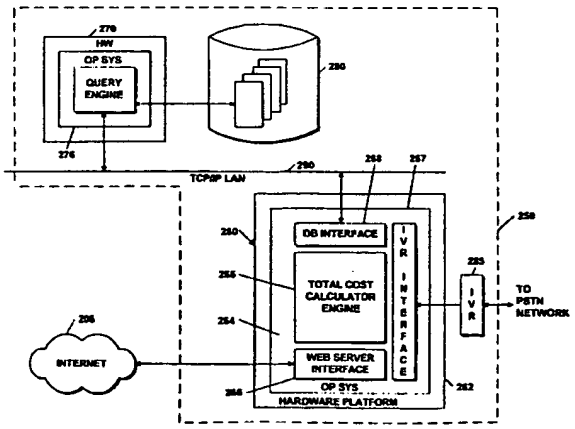
Published:

— *With international search report.*

(88) Date of publication of the international search report: 19 April 2001

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: NETWORK ACCESSIBLE QUOTATION AND SHIPPING SYSTEM



(57) Abstract: A transportation logistics system (250) provides to vendors or shoppers, at the time of purchase, a total global delivered cost quote for shipping a product between locations. The system is accessible over packet switched networks (205), such as the Internet, or over a circuit switched network, such as traditional telephone networks, and includes a web server (260) and a proprietary database (280). A total delivered cost calculator engine (265) retrieves the necessary information from the database, given the requestor input, and performs the necessary calculations. The total delivered cost quote, which includes any applicable inland origin freight, inland destination freight, air freight, ocean freight, insurance, duties, taxes, custom clearance fee, import fee, or service fees is presented to the requestor with both ocean freight and air freight options. The transportation logistic system (250) can coordinate the shipment of the selected product to the delivery destination, and enables the payment of all quoted fees, if the requestor accepts the quote.

WO 00/70519 A3

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 00/13120

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06F17/60

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 06934 A (CSX TECHNOLOGY INC) 11 February 1999 (1999-02-11) abstract; figure 1 page 5, line 27 -page 6, line 3; figure 3 page 5, line 20 - last line; figure 6 page 9, line 22 -page 10, line 28	1-35
X	DE 196 23 285 A (ATRON ELECTRONIC GMBH) 18 December 1997 (1997-12-18) column 1 -column 3	1,2,4-35
A	WO 98 21678 A (FBS CARD SERVICES INC) 22 May 1998 (1998-05-22) abstract	5

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Date of the actual completion of the international search	Date of mailing of the international search report
6 December 2000	15/12/2000

Name and mailing address of the ISA	Authorized officer
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INTERNATIONAL SEARCH REPORT

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9906934 A	11-02-1999	AU 8672898 A	22-02-1999
DE 19623285 A	18-12-1997	NONE	
WO 9821678 A	22-05-1998	US 5910896 A	08-06-1999
		AU 5238098 A	03-06-1998
		EP 0938715 A	01-09-1999